1-1-2014

Not All Types of Delay are Equal: Postsecondary Delay in the U.S. and Taking a Gap Year

Nina DePena Hoe
University of Pennsylvania, ninahoe@gmail.com

Not All Types of Delay are Equal: Postsecondary Delay in the U.S. and Taking a Gap Year

Abstract
Postsecondary delay in the U.S. is a topic that has generated interest in the field of higher education in recent decades. Seventeen percent of U.S. students under the age of 24 who began their postsecondary education in 2004 delayed their entrance for some period of time. At the national level, studies have indicated that students who delay are not only at a disadvantage in terms of their pre-college experiences, including lower socioeconomic status and lower levels of academic preparation and achievement, but also are less likely to enroll in a baccalaureate granting institution and complete a bachelor's degree. Another vein of higher education research, supplemented by promotion from popular media, has reported a host of positive effects associated with delaying specifically for a "gap year," or an intentional, one-year delay for the purpose of personal growth and learning, including travel, work and/or service work. Although gap year students have been reported to come from privileged backgrounds, this type of delay has been associated with higher academic performance and increased maturity in college. Consequently, there remains a significant disconnect in the literature that would explain how the reported positive effects of delaying college specifically for a gap year co-occur with negative effects found to be associated with delaying postsecondary education in general, observed on a national level.

This dissertation is comprised of three papers that focus on different aspects of postsecondary delay in the U.S. The first paper utilizes a large-scale national data set to describe the delay practices of students in the U.S., paying particular attention to the reasons students choose to delay and how different types of students delay for different reasons. This paper also identifies students' pre-college characteristics that predict delay choice. Findings show that there is considerable variation in student characteristics associated with different delay reasons. The second paper uses propensity score matching to create matched samples of students who delay for different reasons and immediate enrollers, to examine how the effects of delaying vary by students' reasons for delaying. The results indicate that when all other factors are equal, delaying for travel as compared to delaying but not for travel has a positive effect on students' academic outcomes and measures of civic engagement six years after starting postsecondary education. Specifically addressing the finding that travel has a positive effect during a delay, the third paper offers findings from interviews of students participating in gap year programs in Ecuador in order to examine the nature of their experiences.

This study contributes to existing literature and the field of higher education by disaggregating postsecondary delay in the U.S. and examining the students and outcomes associated with delaying for different reasons. In addition, this study expands existing frameworks for understanding both the delay and gap year choice processes and how delay and specifically gap year experiences may serve in supporting, student success, overall well-being and development.

Degree Type
Dissertation

Degree Name
Doctor of Philosophy (PhD)

Graduate Group
Education

First Advisor
Janine T. Remillard

Keywords
bridge year, delay, gap year, Global Citizen Year, higher education, postsecondary delay

Subject Categories
Education | Higher Education Administration | Higher Education and Teaching | International Relations

NOT ALL TYPES OF DELAY ARE EQUAL:

POSTSECONDARY DELAY IN THE U.S. AND TAKING A GAP YEAR

Nina DePena Hoe

A DISSERTATION

in

Education

Presented to the Faculties of the University of Pennsylvania

in

Partial Fulfillment of the Requirements for the

Degree of Doctor of Philosophy

2014

Supervisor of Dissertation:

_____

Janine T. Remillard, Associate Professor of Education

Graduate Group Chairperson:

_____

Stanton E. F. Wortham, Professor of Education

Dissertation Committee:

Janine T. Remillard, Associate Professor of Education

Laura W. Perna, Professor of Education

Matthew Steinberg, Assistant Professor of Education

NOT ALL TYPES OF DELAY ARE EQUAL: POSTSECONDARY DELAY IN THE U.S. AND TAKING A GAP YEAR

DEDICATION

This work is dedicated to my parents, Barbara and Bob Hoe, who always supported my passion for education and exploration.

ACKNOWLEDGEMENTS

Getting to this point feels like nothing shy of a miracle. I feel incredibly fortunate to have received so much support along the way from many wonderful people.

Talar, you are the best graduate school best friend anyone could ask for. Above all – thank you for the laughs and answering calls and emails of desperation at all the right times. We met on the very first day of it all… and little did I know. We did this all together – from co-writing papers in ECS, first-year exams, comps, proposals, our dissertations and all of the great things in between; I can't express how much having you as a partner at every step has meant. For your phenomenal editing skills, advising capabilities, dedoosing habits, humor, rationality, generosity, and your attempt to keep me on-time and on-task – I am forever grateful. I look forward to continuing this relationship throughout our personal and professional lives.

Edith, your generosity overwhelms me. I am forever indebted to the time and energy (and mole) you gave to me during this process. You are going to be the best professor and advisor in the world – I have learned so much from you. Paper 2, we did together. And Rachel, my first academic friend – thank you for always being a source of truly valued feedback and advice, and for giving me confidence in my work – no matter where we happen to be around the globe.

Mom, Dad, Victoria and Anna – what a truly amazing family you are, and I would not be at this point without your ***daily*** support. Through this process, you have endured thousands of hours of phone calls, and have done everything from listening to my ideas and struggles, to giving me feedback and carefully editing chapters. Thank you for your curiosity and interest in my work, all of the counseling sessions, many, many laughs, and

always believing in me. I am eternally grateful for you all. I also want to remember Grammy Alice, who inspired my love for learning, stories, and hard work.

I am thankful for my wonderful friends here in Philadelphia who provided me with much needed comic relief and delicious meals over the past few years – Amanda, our Thursday run-dinners are the best tradition; Jesse – thank you for walks, runs and hours of coffee shop support time even when you didn't have work to do; and Sofia – my hslp, gym buddy, and chef – I cannot imagine daily life without you; IES crew and endless entertainment from Jamey DOONE, Claire, and Jess; and others who have been so important during the past years – Kate, my ski, bike, and cook partner; Luke, my secretary; Emily, my dissertation buddy; Eduardo, my work coach; Katie, Matt, and all others from my starting cohort. I'm also grateful for my wonderful friends outside of Philadelphia that have all played a part in getting me to this point. – Julia and Kate, Linny, Cacy; and Colorado friends, for the adventures and hospitality – Bre, Polly, Emmy, Melissa, Molly, Kat, and Stoney. And, Greg, you were instrumental in this entire process. Also, I am appreciative of the faculty and students at the University of Colorado – Boulder who welcomed me into their academic community last year, and to my dear Aunt Kathleen who provided the best dissertation writing retreat imaginable.

Janine, thank you for taking me under your wing when I was a master's student, and supporting me through the evolution of my work over the past five years. I have learned so much from you on many levels. Laura, I am grateful that you agreed to be on my committee, and particularly for your perspectives, your lightning-fast email responses, and for pushing me to make my papers better. Matthew, thank you for guidance and the valuable skills and lessons you taught me during this process. I am also

very appreciative of other professors and GSE staff, without whom I would not be here – Henry May, Becka, Lorna, Aislinn, Ameena, Rand, and Zach for years of computer and data help. The presence of and my access to the secure data room also contributed significantly to my productivity during this process – so thank you, Becka and NCES.

For the content of this dissertation, I am indebted to the leaders in the Gap/Bridge Year world who allowed me to learn from their passions, ideas, goals and programs in general. The inspiration for this work stemmed from a serendipitous connection made through meeting with my first IES speaker, Jonah Rockoff, who connected with Abby Falik, the Founder and CEO of Global Citizen Year. I am grateful to Abby and Shannah and all others at Global Citizen Year, as well as Brad, Shawn, and Jo at Youth International who allowed me to spend time with your groups in Ecuador, become part of your teams, and think through so many important questions and issues with you all. And to Ethan Knight and Bob Clagett who generously shared their time and ideas, and helped me find direction.

And finally, the research reported here is supported by the Institute of Education Sciences, U.S. Department of Education, through Grant #R305B090015 to the University of Pennsylvania. The opinions expressed are those of the authors and do not represent the views of the Institute or the U.S. Department of Education.

ABSTRACT

NOT ALL TYPES OF DELAY ARE EQUAL:
POSTSECONDARY DELAY IN THE U.S. AND TAKING A GAP YEAR

Nina DePena Hoe

Janine T. Remillard

Postsecondary delay in the U.S. is a topic that has generated interest in the field of higher education in recent decades. Seventeen percent of U.S. students under the age of 24 who began their postsecondary education in 2004 delayed their entrance for some period of time. At the national level, studies have indicated that students who delay are not only at a disadvantage in terms of their pre-college experiences, including lower socioeconomic status and lower levels of academic preparation and achievement, but also are less likely to enroll in a baccalaureate granting institution and complete a bachelor's degree. Another vein of higher education research, supplemented by promotion from popular media, has reported a host of positive effects associated with delaying specifically for a "gap year," or an intentional, one-year delay for the purpose of personal growth and learning, including travel, work and/or service work. Although gap year students have been reported to come from privileged backgrounds, this type of delay has been associated with higher academic performance and increased maturity in college. Consequently, there remains a significant disconnect in the literature that would explain how the reported positive effects of delaying college specifically for a gap year co-occur with negative effects found to be associated with delaying postsecondary education in general, observed on a national level.

This dissertation is comprised of three papers that focus on different aspects of postsecondary delay in the U.S. The first paper utilizes a large-scale national data set to describe the delay practices of students in the U.S., paying particular attention to the reasons students choose to delay and how different types of students delay for different reasons. This paper also identifies students' pre-college characteristics that predict delay choice. Findings show that there is considerable variation in student characteristics associated with different delay reasons. The second paper uses propensity score matching to create matched samples of students who delay for different reasons and immediate enrollers, to examine how the effects of delaying vary by students' reasons for delaying. The results indicate that when all other factors are equal, delaying for travel as compared to delaying but not for travel has a positive effect on students' academic outcomes and measures of civic engagement six years after starting postsecondary education. Specifically addressing the finding that travel has a positive effect during a delay, the third paper offers findings from interviews of students participating in gap year programs in Ecuador in order to examine the nature of their experiences.

This study contributes to existing literature and the field of higher education by disaggregating postsecondary delay in the U.S. and examining the students and outcomes associated with delaying for different reasons. In addition, this study expands existing frameworks for understanding both the delay and gap year choice processes and how delay and specifically gap year experiences may serve in supporting, student success, overall well-being and development.

Table of Contents

ACKNOWLEDGEMENTS ..... **iv**

ABSTRACT ..... **vii**

INTRODUCTION TO DISSERTATION **1**

Problem Statement **1**

Contributions to the Field **3**

Theoretical Foundations **4**

Research Questions and Methodology **4**

PAPER #1 – DIFFERENTIATED DELAY: DESCRIPTIONS AND PREDICTORS OF DELAYING POSTSECONDARY EDUCATION FOR DIFFERENT REASONS **7**

Introduction **7**

Statement of Purpose 9

Guiding Frameworks **9**

Literature Review **14**

Postsecondary Delay at the National Level 15

Gap Year Experiences 18

Summary 19

Research Methodology and Design **20**

The Data 21

Variables 25

Missing Data 27

Analytic Methods 29

Limitations 31

Findings 32

Research Question 1: The Empirical Characteristics of Postsecondary Delay Practices 32

Research Question 2: Characteristics of Students Based and Delay Practices 35

Research Question 3: Predictors of Postsecondary Delay 46

Summary of Findings 52

Discussion 54

Areas for Future Research 55

PAPER #2 – NOT ALL TYPES OF DELAY ARE EQUAL: VARIABILITY IN THE EFFECTS OF DELAYING POSTSECONDARY 58

Introduction 58

Statement of Purpose 60

Guiding Frameworks 60

Theoretical Framework 61

Conceptual Framework 63

Literature Review 64

Postsecondary Delay at the National Level 65

Gap Year Experiences 69

Summary 70

Research Methodology and Design 71

The Data 71

Missing Data 77

Analytic Methods: Propensity Score Matching 81
Limitations 95
Findings 97
Research Question 1: The Effects of Delay on First-year Enrollment Choices and Educational Expectations 98
Research Question 2: The Effects of Delay on Academic Performance, Educational Satisfaction, and Civic Engagement 100
Summary of Findings 111
Discussion 113
The Academic Effects of Delay 113
Delay Reasons 116
Identifying "Gap Year" Delayers 118
Delay Decision Timing 119
Additional Limitations 119
Recommendations for Postsecondary Practices 120
Areas for Further Research 122
PAPER #3 – WHAT'S IN A GAP?: WHY AMERICAN YOUTH PARTICIPATE IN A GAP YEAR AND HOW THEY BENEFIT AS INDIVIDUALS 124
Introduction 124
Statement of Purpose 127
Gap Year Activities and Experiences 128
Guiding Frameworks 128

Student College Choice 129
Pre-College Experiences 134
Conceptual Framework 139
Review of the Literature 140
Gap Year Participants 141
Motivations for Taking a Gap Year 141
Benefits of a Gap Year 143
Critiques of Gap Years 149
Summary and Shortcomings in the Literature 150
Methodology 151
Sources of Data 151
Data Collection 155
Design Rationale 156
Methods of Analysis 157
Limitations 159
Findings 160
Research Question 1: The Gap Year Choice Process 160
Research Question 2: Gap Year Experiences 169
Research Questions 3 and 4: Effects of Gap Year Experiences 176
Discussion 191
Contributions to Existing Frameworks 191
Additional Contributions 193
Additional Limitations 196

Implications for Gap Year Delay Practices **196**

Areas for Further Research **197**

CONCLUSION TO THREE PAPER DISSERTATION **199**

Primary Conclusions **199**

Delayers Are Different From Immediate Enrollers 200

Not All Types of Delay are Equal 201

Delaying for Travel is Precipitated by and Leads to Gains in Particular Attitudes, Behaviors, and Forms of Capital 203

Limitations **205**

Contributions of this Study **208**

Recommendations for Future Research **210**

Recommendations for Postsecondary Delay Practices **213**

Appendix A **217**

Appendix B **220**

Appendix C **221**

Appendix D **223**

Appendix E **224**

Appendix F **225**

REFERENCES **229**

List of Tables

Table 1. Unweighted and Weighted Sample Counts for Selection Criteria and Resultant Analytic Samples 24

Table 2. Distribution of Delayers by Reason Among 2003-2004 First-Time-Beginners 33

Table 3. Number of Reasons Indicated for Delaying Among 2003-2004 First-Time-Beginners 34

Table 4. Most Common Delayer Profiles Among 2003-2004 First-Time-Beginners 34

Table 5. Average Number of Years Spent Delaying for 2003-04 FTBs Younger Than 24 37

Table 6. Characteristics of Students Based on Delay Behavior 40

Table 7. Predictors of Delaying as Compared to Not Delaying and Among Delayers, Predictors of Delaying for Different Reasons (Weighted) 50

Table 8. Unweighted and Weighted Sample Counts for Selection Criteria and Resultant Analytic Samples 75

Table 9. Distribution of Sample Along Delay Characteristics 82

Table 10. Exploring Matching Methods to Improve Balance 88

Table 11. Caliper Radius (.01) Matching Statistics for All Match Pairs 90

Table 12. Odds Ratios from Propensity Score Matching and Logistic Regression to Predict First-Year Enrollment Choices 106

Table 13. Coefficients and Odds Ratios from Pre-College Characteristic Propensity Score Matching and Logistic Regression to Predict Academic Outcomes 107

Table 14. Coefficients Odds Ratios from Pre-College and Enrollment Characteristic Propensity Score Matching and Logistic Regression to Predict Academic Outcomes 108
Table 15. Odds Ratios from Pre-College Characteristic Propensity Score Matching and Logistic Regression to Predict Educational Satisfaction and Civic Engagement Outcomes 109
Table 16. Odds Ratios from Pre-College and Enrollment Characteristic Propensity Score Matching and Logistic Regression to Predict Educational Satisfaction and Civic Engagement Outcomes 110
Table 17. Sample Characteristics 155
Table 18. Participant Reported Reasons For Taking a Gap Year 161
Table 19. Intended Gap Year Program Experiences 170
Table 20. Participant Reported Experiences Had During a Gap Year 171
Table 21. Participant Reported Effects of Gap Year Participation 178

List of Figures

Figure 1. Expanding Perna's (2006) Conceptual Model for Student College Choice 14

Figure 2. Perna and Thomas's (2008) "Transitions and Indicators of Student Success" . 61

Figure 3. Kernal Density Plot of Propensity Scores of Delayers (Treated) and Immediate Enrollers (Non-treated) for the Entire Sample 91

Figure 4. Kernal Density Plot of Propensity Scores of Delayers (Treated) and Immediate Enrollers (Untreated) for the Matched Sample (Weighted) 92

Figure 5. Expanding college choice in Perna's (2006) proposed conceptual model..... 134

Figure 6. Participating programs 153

INTRODUCTION TO DISSERTATION

The implications of delaying postsecondary education have generated substantial interest in the field of higher education in recent decades. Postsecondary enrollment behavior as well as success (Adelman, 2006; Bozick & DeLuca, 2005). "Gap years" (a specific type of postsecondary delay) have also generated interest among popular media sources, academic scholars, and prestigious institutions. In particular, the potential contributions of a gap year to college readiness and college success are often promoted (Bull, 2006; O'Shea, 2013). In this dissertation, I define a gap year[1] as an intentional, one-year delay of postsecondary education for the purpose of personal growth and learning, often including travel, work and/or service. The three papers that follow tease apart some of the more nuanced aspects of delay occurring at the national level, and draw attention to the unique experiences and effects of gap years that question the more widely accepted understandings about postsecondary delay in general.

Problem Statement

At the national level, postsecondary delay in general has been fairly well monitored. Studies that utilize nationally representative data have consistently found that students who delay are from lower income backgrounds and have lower levels of academic preparation and achievement when compared to their peers who enroll immediately (Carroll, 1989; Goldrick-Rab, 2010; Horn, Forrest-Cataldi, & Sikora, 2005). For these populations, delaying has been associated with a lower likelihood of entering a four-year, degree granting institution and with decreased chances of bachelor's degree

[1] The term "bridge year" is emerging in literature and practice as a replacement for "gap year" as I have defined it. In this paper, I use the term gap year for the sake of efficiency and consistency with prior research. In other literature the term gap year has also been used to describe a similar year of travel between college and graduate school or career (Lyons et al., 2012) or any other break in the educational or career path (Bull, 2011; O'Reilly, 2006; Simpson, 2005).

attainment (Adelman, 2006; Bozick & DeLuca, 2005).

On the other hand, gap year-specific delay trends and outcomes have been monitored to a lesser extent. In large part due to the ambiguity of the definition and the relatively small proportion of individuals participating, there is presently no source of data in the U.S. that has captured the population of gap year participants or their outcomes. Also, of the existing peer-reviewed studies, which are limited to approximately ten single-program or institution studies, only one focuses on U.S. students, and few have included sample sizes of greater than 30 (O'Shea, 2011b; Spenader, 2011). As far as research findings, gap year participants in the U.K. and Australia have been reported to be predominantly white, females, without disabilities, from middle-class backgrounds who attended private secondary schools (Birch & Miller, 2007; Horn et al., 2005; Jones, 2004; King, 2011; Martin, 2010). The outcomes associated with gap year delays are also different from those for delay in general. Academic scholars and media sources have identified positive effects associated with gap year participation related to language development, personal growth, and college and career attainment (Birch & Miller, 2007; King, 2011; Knight, 2014; Martin, 2010; O'Shea, 2011b; Stehlik, 2010).

Some studies have suggested that students' backgrounds and high school academic characteristics (Bourdieu, 1973; Lareau, 2011) may be driving factors in the observed differences in delay effects across student groups (Goldrick-Rab, 2010). There is concern that students from higher income backgrounds may have access to delay activities that contribute to positive effects, which are not available to those from lower income backgrounds. Another possibility is that particular delay activities have little bearing on postsecondary outcomes, and that instead, outcomes are simply a result of

students' pre college experiences. Either way, delay may thereby be understood as a form of social and cultural reproduction, where low-income students see negative outcomes after a delay, while middle- and high-income students experience positive outcomes. However, at the present time, these relationships are not well understood.

Contributions to the Field

Examining the larger picture of postsecondary delay practices in the U.S., there is significant variation in findings related to the characteristics of students who delay and the associated outcomes. This study is motivated by five primary gaps in the literature that would help to explain these disparities. First, no attention has been paid to the myriad of reasons for which students delay. Second, all previous national studies have examined delay as a uniform phenomenon and treated all delayers as a homogenous group. Consequently, there is no understanding of how different types of students delay for different reasons. Third, no studies have examined how delay outcomes vary with respect to the reason for the delay. Fourth, prior research has not examined gap year delays in relationship to delay, broadly. Finally, it is unclear how particular elements of delay experiences reported by participants, the media, and researchers to be positive may be operating to benefit students academically, personally, or in any other ways. As a result, delay overall may be preemptively or unjustifiably characterized negatively due to this lack of differentiation.

As college counselors, mentors, parents, and teachers think about how to best guide students in making choices about if and how to delay, a comprehensive understanding of the effects of delaying for different reasons is critical. Each year, U.S. high school students are faced with choices surrounding college enrollment timing.

National data show that approximately 30% of entering postsecondary students delay for some period of time (BPS:04/09). In addition, as the effects of delaying become better understood, there is an emerging need to identify the types of students that are more likely to delay for different reasons, as well as the student characteristics that predict different delay choices.

Theoretical Foundations

This dissertation's three papers investigate two distinct processes: student delay choice and student success in the context of delay experiences. Several established conceptual frameworks guide these studies. In particular, to understand the choice to delay and participate in a gap year, this study draws on Perna's (2006) proposed conceptual model of student college choice. Second, this study draws on Kuh's (2006) and Perna and Thomas's (2008) theories of student success that connect pre-college experiences to post-college outcomes in examining the implications of gap year experiences for youth as they move forward in their lives, particularly into college. While these models were conceptualized for college choice and success without delay in mind, the findings from this study contribute to these conceptualizations, suggesting ways in which they may need to be expanded when considering delay.

Research Questions and Methodology

This dissertation questions the assumption that all delay is the same and that the group of delaying students is homogenous and distinctly different from their peers who enroll immediately. Multiple sources of data and methods of analysis are employed across these three papers. The first two papers utilize nationally representative data from the Beginning Postsecondary Students Longitudinal Study (BPS:04/09) collected by the

National Center for Education Statistics (NCES) of the Department of Education to disaggregate postsecondary delay practices by delay reason. A joint goal of the first two papers is to identify the group of students taking a "gap year" within the national sample. The first two papers make comparisons between different types of delayers and immediate enrollers, as well as among different types of delayers (including those hypothesized to be delaying for a "gap year"). The first paper uses descriptive statistics, cross-tabulations, chi-square tests, and linear regression to describe delay practices and the student characteristics associated with different types of delay. Additionally, logistic regression models are used to identify the student characteristics that predict delaying for different reasons.

The second paper uses propensity score matching to create matched samples of delayers and immediate enrollers. Based on the propensity scores, linear, logistic, and multinomial logistic regressions are used to estimate the causal effects of delaying for different reasons on students' enrollment choices and educational expectations, as well as on measures of academic performance, educational satisfaction, and civic engagement. Students' enrollment choices and academic performance outcomes were chosen because they are common indicators of "student success" (Perna & Thomas, 2008), while the other indicators were selected to address some of the reported effects of gap year experiences (Haigler & Nelson, 2013; O'Shea, 2013).

The third paper is an attempt to better understand findings from the first two papers regarding the positive effects of travel-related delay, as compared to other types of delay, on measures of academic performance and civic engagement. Here, gap year experiences in Ecuador are used to explore delay experiences that include travel. This

paper takes a qualitative, and specifically phenomenological approach to understanding the reasons American youth choose to take a gap year, the participant-reported effects of taking a gap year, and the critical elements of gap year and travel-related delay that contribute to positive experiences. This study uses data from semi-structured, in-depth interviews and focus groups, as well as survey responses of a total of 42 gap year participants and staff members in three different international gap year programs operating in Ecuador during the fall of 2013. The purpose of the third paper is to describe the gap year choice process, gap year experiences, and identify valuable elements of gap year experiences that may be replicated in other settings in order to provide advantageous opportunities for a broader group of youth.

The three papers that comprise this dissertation speak to various elements of postsecondary delay in the U.S. that are presently unexplored and disconnected. No other identified study examined delay with respect to reason, or situated gap year delay in the larger delay context. The collective papers here are meant to serve as a resource for multiple constituents. Primarily, findings from this study can inform students, parents, and college advisors with respect to decisions related to college enrollment timing. Second, for those involved in making decisions about and structuring delay experiences (e.g., youth support services and program directors), the identification of particular activities that are linked to positive outcomes will help to these opportunities more accessible to a diverse group of students. Finally, within the academic research community, this dissertation contributes to and expands existing frameworks for understanding student college choice and student success to consider the role of delay.

PAPER #1 – DIFFERENTIATED DELAY: DESCRIPTIONS AND PREDICTORS OF DELAYING POSTSECONDARY EDUCATION FOR DIFFERENT REASONS

Introduction

Postsecondary delay in the United States is a topic that has generated interest in the field of higher education in recent decades. Postsecondary delay has been identified as a critical factor in predicting postsecondary enrollment behavior as well as success (Adelman, 2006; Bozick & DeLuca, 2005). While there is some variation annually, my analyses of the Beginning Postsecondary Students Longitudinal Study (BPS:04/09) from the National Center for Education Statistics (NCES) of the Department of Education show that within the last decade, approximately 30% of entering postsecondary students, and 20% of those under the age of 24, delayed their entrance for some period of time.

Over the past 25 years, there have been several efforts to identify and describe the characteristics of students who delay their postsecondary education (Carroll, 1989; Horn et al., 2005). Additionally, a handful of studies have examined postsecondary enrollment patterns and academic outcomes associated with delaying (Adelman, 2006; Bozick & DeLuca, 2005). Studies that utilize nationally representative data have consistently found that students who delay are from lower income backgrounds and have lower levels of academic preparation and achievement when compared to their peers who enroll immediately (Carroll, 1989; Goldrick-Rab, 2010; Horn et al., 2005). Delaying has also been associated with a lower likelihood of entering a four-year, degree granting institution and with decreased chances of bachelor's degree attainment (Adelman, 2006; Bozick & DeLuca, 2005). However, in all of these studies, delay has been examined as a uniform phenomenon and all delayers treated as a homogenous group. No attention has

been paid to the myriad of reasons for which students delay or how different types of students may be delaying in different ways.

Another vein of higher education research has focused on a specific group of students delaying for a gap year, and the positive effects associated with this particular type of delay (Martin, 2010; O'Shea, 2011; Spenader, 2011). Defined here, a gap year is a one-year delay of postsecondary education for the purpose of personal growth and learning, often including travel, work and/or service. The topic of a gap year has generated substantial interest among popular media sources, academic scholars, and prestigious institutions in the U.S. in recent years. Although no empirical study has examined the population of gap year takers, they have been described as a fairly homogenous group, with middle-class, white females over represented (Birch & Miller, 2007; Goldrick-Rab & Han, 2011; King, 2011a; Martin, 2010). Several peer-reviewed studies focusing on students in the U.K. and Australia have shown that students who have taken a gap year experience a host of personal benefits (Coetzee & Bester, 2009; Heath, 2007; King, 2011; O'Shea, 2011b), higher levels of motivation after their gap year (Martin, 2010) and higher academic performance in college (Birch & Miller, 2007).

Despite these studies, there has been no examination of how students differ based on their reasons for delaying, and in particular, how "gap year" delayers compare to other types of delayers. Further, there remains a disconnect in the literature that would explain how the reported positive effects of delaying college specifically for a gap year co-occur with negative effects of delaying postsecondary education. To address this knowledge gap, this study examines different student groups and the variety of ways in which they delay postsecondary education.

Statement of Purpose

This study has several distinct purposes and areas of contribution. This study examines the assumption that all delay is the same and that the group of delaying students is homogenous. Disaggregating national postsecondary delay practices by delay reason, three central deficits in the current understanding of delay are addressed. To begin, this study presents an overview of postsecondary delay practices in the U.S. with a national sample of students beginning postsecondary education for the first time in 2003-04. Second, this study describes students by the reason for their delay, based upon their pre-college characteristics including demographics, family background and measures of academic preparation and achievement. Finally, this study identifies the pre-college characteristics that predict delay, and specifically different types of delay. An additional goal of this study is to identify the group of students taking a "gap year" within the national sample. This study contributes to existing literature on postsecondary delay by exploring variation in delay practices and provides a critical foundation for a more detailed examination of the effects associated with delaying for different reasons, which is the topic of the next paper in this dissertation.

Guiding Frameworks

This study tests the applicability of Perna's (2006) proposed conceptual model for student college choice in examining the choice to delay entrance to postsecondary education for different reasons. College student decision has been examined by a variety of scholars, drawing mainly from economic and social theory. From the economic perspective, Becker's (1993) theory of human capital assumes that choices or investments are "rational responses to a calculus of expected costs and benefits" (p. 17) and that

"education and training are the most important investments in human capital" (p. 17). Scholars have utilized this theory to posit that students, along with their parents, undertake a cost-benefit analysis when making the college choice (Manski & Wise, 1983). The short- and long-term benefits of higher education to both individuals and society are widely publicized and promoted (Baum, Ma, & Payea, 2010; Becker, 1993; Perna, 2005). Short-term benefits include the academic, social, and cultural experiences of college, such as learning for enjoyment, participating in events, and increasing social status as well as lower initial unemployment rates (Perna, 2005). Over the longer-term, college graduates can expect to see significantly higher earnings, full-time year-round work, comprehensive health insurance, pension plans, and greater civic participation (Baum et al., 2010; Bourdieu, 1986). Economists have consistently shown a jump in earnings with attainment of a bachelor's degree (Baum et al., 2010) Education has also been shown to have positive effects on health, civic engagement, and appreciation of culture (Becker, 1993). The costs associated with college enrollment include the monetary aspects of tuition and fees, as well as the loss of earnings and leisure time associated with time spent enrolled in postsecondary education (Bourdieu, 1986; Perna, 2005). Economic theory views college choice as a result of weighing of these costs and benefits.

Sociological theory, and specifically Bourdieu's (1986) theory of cultural and social capital, argues that one's background characteristics contribute to one's agency in the decision-making process. Social capital is defined as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words,

to membership in a group" (Bourdieu, 1986, p. 51). Bourdieu (1986) argues that various forms of capital can be exchanged to acquire other forms of capital and used to one's benefit. Thus, social capital is the relationships, connections and social networks that allow individuals to gain access to cultural and economic capital. Cultural capital is divided into three types: embodied, objectified, and institutional. Bourdieu (1996) defines embodied cultural capital as the "long-lasting dispositions of the mind or body" or "the work of acquisition is work on oneself (self-improvement)." Physical goods or possessions such as "pictures, books, dictionaries, instruments, machines, etc.," are examples of objectified cultural capital. Finally, institutional capital is akin to academic credentials and institutional reputation and recognition (Bourdieu, 1986). Drawing heavily on this framework, Lareau (2011) showed that social class is significantly related to the choices that parents make with respect to raising their children and determining their educational trajectories. Specifically, she found that middle-class families were able to leverage both financial and knowledge-based resources in order to make institutional and enrollment decisions about high school and college in distinctly different ways from working-class families (Lareau, 2011).

In her proposed conceptual model of student college choice, Perna (2006) (see *Figure 1*) argues that individually, both the economic and social theories lack in their ability to fully explain both the cost-benefit analysis undertaken by students in the college-choice process and the ways in which social and cultural factors influence individuals' considerations of criteria for making this decision. For this reason, her model integrates both perspectives, and serves as a framework for understanding differences in enrollment choices for students from different backgrounds and social and cultural

upbringings. Perna (2006) argues that the college choice process is situated within four contextual layers: (1) the social, economic, and policy context, (2) the higher education context, (3) the school and community context, and (4) the *habitus*. This nested model's inward orientation specifies that each of outer layers influences each of the successive inner layers, which all contribute to college choice.

At its core, individuals' college choice is informed by students' *habitus* (Bourdieu, 1986), which Perna (2006) defines as, "an individual's internalized system of thoughts, beliefs, and perceptions that are acquired from the immediate environment" (p. 113). She argues that the *habitus* also "conditions an individual's college-related expectations, attitudes, and aspirations" (Perna, 2006, p. 113). The habitus is related to individuals' demographic characteristics and forms of cultural and social capital (Bourdieu, 1986; Coleman, 1988; Lareau, 2011), their human capital, in terms of academic preparation and achievement, and economic capital in terms family income and financial aid. These elements, along with the outer three contextual layers, directly influence the final cost-benefit analysis. Perna's (2006) model posits that students' college-related decisions are deeply informed by their habitus; students with different thoughts, beliefs, and perceptions about college and its cost and benefits will make decisions differently from one another.

In the second layer of Perna's (2006) proposed model, the school and community context comprises the types and availability of resources at the students' sending school as well as the structural supports and barriers. Drawing on McDonough's (1997) theory of "organizational habitus" as well as Stanton-Salazar's (1997) conceptualization of

"institutional agents," the school and community context suppose that social relationships and structures inform student college choice both positively and negatively.

The higher education context makes up the third layer, encompassing specific institutional characteristics and location, as well as the institutions' marketing and recruitment strategies. Finally, the social, economic, and policy context frame the entire process and include the demographic, economic, and public policy characteristics of the state and national in which students live (Perna, 2006). All of these contexts and variables comprise, what I refer to as, students' "pre-college" characteristics (also see Kuh, 2006).

College choice has typically been understood as a decision of whether or not to enroll, and then subsequently, a decision about where and how to enroll (e.g., full- or part-time, at a four- or two-year, public or private institution). Focusing specifically on the first decision of whether and *when* to enroll, Rowan-Kenyon (2007) tested and confirmed the application of Perna's (2006) model to understand students' decisions to not enroll, enroll immediately, or delay enrollment. She concluded that Perna's (2006) model was appropriate for understanding student delay timing.

This study explores a conceptual model that expands Perna's (2006) model to understand how students' pre-college characteristics are related to the choice of enrollment timing, and specifically the choice to delay for different reasons. *Figure 1* displays this proposed expansion of Perna's (2006) conceptual model for student college choice, where college choice includes no enrollment, immediate enrollment, and delayed enrollment for different reasons and lengths of time. While these delayers also partake in the decision of how and where to enroll, this study focuses specifically on the choice to delay college enrollment for specific reasons.

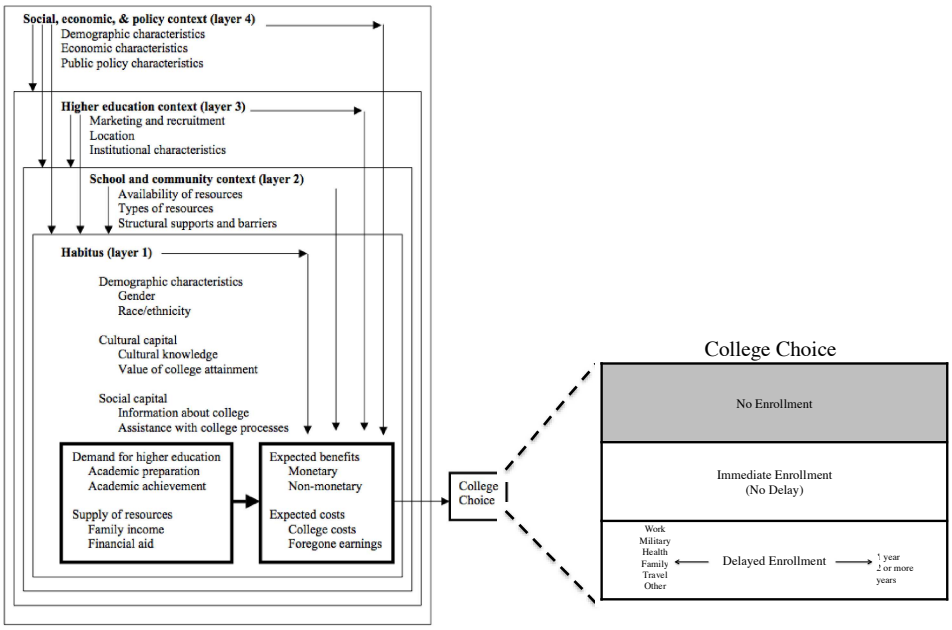

Figure 1. Expanding Perna's (2006) Conceptual Model for Student College Choice

Literature Review

At the national level, a considerable amount is known about the characteristics of students who delay postsecondary education and how they differ from students who enter immediately, both in terms of their background characteristics as well as their enrollment practices and rates of degree completion. Although not as comprehensive, there is also a basic understanding of the types of students who participate in a gap year and outcomes associated with their participation. However, generally these areas of research have drawn seemingly contradictory conclusions about the types of students who delay and the effects of delaying. Furthermore, it remains unclear as to how gap year delayers compare and contrast with students who delay for other reasons. This section describes the major

findings related to postsecondary delay and gap year experiences to date, and identifies areas in need of deeper exploration.

Postsecondary Delay at the National Level

At the present time, studies related to postsecondary delay have focused on a few key issues. Primarily, all studies have attempted to inventory the population of students delaying as compared to their non-delaying counterparts within their respective data sets (Adelman, 2006; Bozick & DeLuca, 2005; Carroll, 1989; Goldrick-Rab & Han, 2011; Hearn, 1992; Horn et al., 2005; Niu & Tienda, 2013; Rowan-Kenyon, 2007). Second, questions about the role of delay length have been raised in order to identify how student characteristics and eventual associated outcomes vary by delay length (Horn et al., 2005; Rowan-Kenyon, 2007). Additionally, scholars have examined the relationships between delay and both enrollment patterns (Niu & Tienda, 2013) and college completion (Adelman, 2006; Bozick & DeLuca, 2005). The following subsections describe findings across these issues.

Delaying students. Using the High School and Beyond (HS&B) data set of students who graduated from high school in 1980, Carroll (1989) and Hearn (1992) were among the first scholars to research postsecondary delay practices in the U.S. Their studies drew similar conclusions and set the foundation for future studies exploring related issues using more current datasets. Ultimately, studies have found that students who delayed their postsecondary education were more likely to be male, Black, from lower income backgrounds and to have lower levels of academic credentials and educational aspirations (Carroll, 1989; Hearn, 1992). These observed trends have remained constant through the past two and a half decades (Bozick & DeLuca, 2005).

Additional research findings demonstrate that delay is also associated with having family responsibilities, lower levels of parental education, lower levels of academic preparation, achievement, and aspirations (Goldrick-Rab, 2010; Horn et al., 2005), as well as lower levels of social and cultural capital as measured by several family- and school-based indicators (Rowan-Kenyon, 2007).

Length of delay. A number of studies have examined the length of time that students delay (Horn et al., 2005; Niu & Tienda, 2013). Based on analyses of the BPS:96/01 data, Horn et al. (2005) described that approximately 9% delayed for one year or less, 7% delayed 2-4 years, 12% delayed 5-9 years, and the remaining 12% delayed ten or more years. Niu and Tienda (2013) reported that among Texas graduating seniors in 2002, 10% delayed for one year or less, and 4% delayed 2-4 years. Because the structure of these samples is not consistent (one is a cross-sectional study and the other is a cohort study), making comparisons across studies does not make sense.

Enrollment patterns. Studies have also shown differences in the enrollment patterns of delayers compared to immediate enrollers. Consistently, descriptive analyses have demonstrated that as compared to immediate enrollers, a smaller proportion of delayers attend four-year institutions (Bozick & DeLuca, 2005; Niu & Tienda, 2013) or enroll full-time (Horn et al., 2005). The fact that delayers have been shown to enter two-year institutions (instead to a four-year institution) as well as enroll part-time (instead of full-time) has been particularly concerning to some scholars since, as these behaviors and choices are known risk factors to degree persistence and graduation (Kuh, Kinzie, & Buckely, 2006).

Postsecondary outcomes related to delay. Understanding the characteristics of delaying students has been particularly pertinent when considering effects of delaying on postsecondary outcomes. Several studies have addressed the issue of degree completion (Adelman, 2006; Bozick & DeLuca, 2005; Carroll, 1989). In general, these studies have shown that delaying is associated with lower odds of bachelor's degree completion, although with some variation in the effect size (Adelman, 2006; Bozick & DeLuca, 2005; Carroll, 1989). These studies have attempted to both identify the negative outcomes associated with delaying as well as the types of students most likely to delay.

Conclusions and areas for expansion. The research presented above exploring students who delay (Carroll, 1989; Horn et al., 2005), the role of delay length (Horn et al., 2005; Niu & Tienda, 2013), and enrollment patterns of delayers (Bozick & DeLuca, 2005) point to several key trends with respect to the relationship between delayers and immediate enrollers. First, postsecondary delay is associated with being male, of minority status, of low socioeconomic status, and having family responsibilities. And, as compared to immediate enrollers, delayers have lower levels of parental education, and lower levels of both academic credentials and educational aspirations. Second, students are delaying for a variety of lengths of time, but a delay of one year appears to be most common. Third, delaying is associated with attending less selective institutions as compared to immediately enrolling (Bozick & DeLuca, 2005; Niu & Tienda, 2013). And fourth, college completion rates are lower among students who delay.

One major shortcoming of the studies reviewed here has been their inability to disaggregate and describe delayers based on the reasons for their delay, which assumes the group of delayers is homogeneous. In an attempt to develop a more comprehensive

understanding of delayers, delay practices, and related outcomes in the U.S., an exploration of how student characteristics, including enrollment patterns, vary with respect to the different reasons that students delay, is needed.

Gap Year Experiences

Although there have been few empirical studies undertaken to examine U.S. gap year participants and their experiences, studies in the U.K. and Australia report that gap year participants are predominantly white, disability-free, and females from middle-class backgrounds who have attended private schools (Horn et al., 2005; Jones, 2004; King, 2011; Martin, 2010). In terms of the personal characteristics of gap year takers, studies in Australia have shown that as students, they tend to be less motivated than their peers who enroll immediately (as measured by lower scores on the "Motivation and Engagement Scale (MES-HS) for high schoolers). Additionally, they have been reported to have more post-school uncertainty and lower levels of high school achievement than those who enroll immediately (Birch & Miller, 2007; Haigler & Nelson, 2005; Martin, 2010; O'Shea, 2011b; Stehlik, 2010).

Prior studies have identified a variety of reasons students elect to take a gap year, including: personal, educational, career-related, and financial (Haigler & Nelson, 2005; O'Shea, 2011a; Stehlik, 2010). Several studies reported academic burnout and the need for an academic break as driving factors for gap year participation (Haigler, 2012; Lyons, Hanley, Wearing, & Neil, 2012; O'Shea, 2011a). Self-exploration, personal growth, and development with respect to maturity and independence were also commonly reported reasons for taking a gap year.

Although there have been few empirical studies undertaken to examine gap year experiences for U.S. students, it is generally believed that taking a gap year is a positive and beneficial endeavor. U.K. foreign Secretary, Jack Straw, has publically promoted gap year practices, arguing that, "Taking a gap year is a great opportunity for young people to broaden their horizons, making them more mature and responsible citizens. Our society can only benefit from travel which promotes character, confidence, decision-making skills" (as cited in Simpson, 2005, p. 453). In terms of research, anecdotal evidence as well as some peer-reviewed studies have identified positive effects associated with participation relating to personal growth ("Bridge Year Program," n.d.; Martin, 2010), language development (Clagett, 2012; Lyons et al., 2012; Simpson, 2005; Spenader, 2011), global citizenship (Heath, 2007; King, 2011), and college and career attainment for students in the U.K. and Australia (Birch & Miller, 2007; King, 2011; Martin, 2010; O'Shea, 2011b; Stehlik, 2010). Across the nation many colleges and universities, including Harvard and Princeton, have begun to embrace the idea of a gap year, supporting the notion that gap year experiences are beneficial to both students and their future postsecondary institutions.

Summary

Synthesis of literature exploring student characteristics and the effects associated with delaying in general as well as for a gap year in particular, have resulted in some clear discrepancies with respect to the characteristics of students who delay and the impacts of delaying on college academic outcomes. In general, studies that examined delay in general view delay as a threat to degree completion (Adelman, 2006; Bozick & DeLuca, 2005), while those who studied gap year delays concluded that delay offers

many personal and academic benefits to participants (Martin, 2010; O'Shea, 2013). Also, gap year participants have been described quite differently from the more general delaying students. These findings confirm a need for a more nuanced understanding of delay that might connect these areas of research. Based on the fact that gap year delayers appear to be different from the larger group of delaying students, there is reason to believe there are a variety of reasons for which individuals delay and myriad outcomes associated with delay type. In order to develop a comprehensive understanding of delaying students and their related outcomes, it is essential to examine students and their characteristics across delay reasons. This study attempts to address the current gaps in our understanding of postsecondary delay.

Research Methodology and Design

This study examines the diverse landscape of postsecondary delay practices in the United States and how different student characteristics are associated with various delay reasons. Using descriptive statistics (e.g., cross-tabulations and chi-square tests), and linear and logistic regression, this study answers the following three research questions:

1. What are the characteristics of postsecondary delay practices, both in terms of timing and reason, among those who are enrolled in postsecondary education?
2. How do the characteristics of delaying students differ based on reason and length of delay, and from those who do not delay?
3. What are the predictors of delaying postsecondary enrollment for different reasons and lengths of time?

The Data

This study utilizes data from the 2004/2009 Beginning Postsecondary Secondary Longitudinal Study (BPS:04/09) from the National Center for Education Statistics (NCES), which was designed to "address the need for nationally representative data on key postsecondary education issues" (Wine, Janson, & Wheeless, 2011, p. 1). The study examines the experiences over the course of a six year period of first-time beginners (FTBs), defined as "students who started their postsecondary education for the first time during the 2003–04 academic year at any postsecondary institution in the United States or Puerto Rico" (Wine et al., 2011 p. iii). The BPS:04/09 survey includes students who were FTBs in the National Postsecondary Student Aid Study in 2003-04 (NPSAS:04).

The primary purpose of the NPSAS:04 study was to understand how students and their families pay for postsecondary education. The survey targeted all undergraduate, graduate, and professional students, enrolled in Title VI postsecondary institutions in the U.S. and Puerto Rico between July 1, 2003 and June 30, 2004. Title IV institutions are those eligible for the federal student aid program and include public and private (both not-for-profit and for-profit) four-year, two-year, and less-than-two year colleges and universities. The administration of the survey entailed an eight-step sequential process. Beginning with construction of a sampling frame from the 2000-2001 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC), 58 institutional strata were created based upon "institutional level, institutional control, highest level of offering, Carnegie classification, and state" (Cominole et al., 2006, pp. 5-6). Within institutions, students from eight strata ranging from both in- and out-of-state FTBs to doctoral students were sampled. NPSAS:04 stratified and oversampled FTBs

separately from other undergraduate students in anticipation of the 2006 and 2009 BPS follow-up surveys. Originally, 56,070 FTBs were targeted and 49,410 contacts were established, yielding an 88.1 percent response rate. Five sources of data contributed to the NPSAS:04: (1) Student Record abstraction which involved institutionally provided financial aid and registrar records for students, entered electronically at the institution, (2) Student Interviews, either self-administered or interviewer administered, via a web-based questionnaire, (3) Central Processing System (CPS)'s data from the Free Application for Federal Student Aid (FAFSA) form, (4) the National Student Loan Data System (NSLDS)'s data on Title IV loans and Pell Grants, and (5) IPEDS information about postsecondary institutions. The student interview was comprised of six sections including enrollment, student expenses and financial aid, employment, education experiences, student background, and locational information.

In both 2006 and 2009, NCES contacted eligible students using a variety of methods including batch tracing, mailings, Computer Assisted Telephone Interviewing (CATI) tracing, intensive tracing, and field tracing. The content of the interviews focused on four key topics: enrollment history, enrollment characteristics, employment, and background. The interviews were administered in the same fashion as NPSAS:04 student surveys. Surveys took approximately 20 minutes to complete and students were financially incentivized at each stage of the data collection process. Among the panel respondents there was an unweighted response rate of 87.0% and a weighted response rate of 85.7%. Additionally, postsecondary transcripts were requested and obtained with an 87% response rate from all institutions attended by participants between July 1, 2003 and June 30, 2009. Transcripts were keyed and coded using a specialized system. In total,

there are 1,647 variables in the data set. The data used in this study are from the BPS:04/09 restricted use database.

Previous studies focusing on postsecondary delay have utilized NELS:88 , BPS:96/01, and 2002 Texas graduating seniors (Bozick & DeLuca, 2005; Goldrick-Rab & Han, 2011; Horn et al., 2005; Niu & Tienda, 2013; Rowan-Kenyon, 2007). Presently, no peer-reviewed studies have utilized more current data sets, including BPS:04/09, to examine delayers.

Analytic sample. The 2003-04 National Postsecondary Student Aid Study (NPSAS:04) included 44,670 *potential* FTBs (composed of confirmed FTBs and other "likely" FTBs). Of this group, 21,580 were confirmed non-FTBs or non-respondents. The first follow-up study in 2006 included a sample of 23,090 students deemed eligible from the 2004 sample and the final sample in 2009 included 18,640 students. The complete BPS:04/09 data set contains completed information in the form of both interview and administrative records (postsecondary transcripts) for a total of approximately 16,680 students from an eligible sample of 18,640 students. In total, there were approximately 16,120 panel respondents who participated in all three waves of data collection. The BPS:04/09 data set contained an unweighted total of 16,680 first-time beginner respondents, representing 3,746,295 students.

Because this dissertation is concerned with the postsecondary enrollment decisions and related experiences of students who have graduated from high school in the United States, I excluded students who had not earned a high school diploma or certificate (N=1,360) and those who attended a foreign high school (N=370). This reduced my unweighted sample size to 14,960 respondents and my weighted population

size to 3,304,827. I then restricted the analytic sample to FTBs under the age of 24 years for two salient reasons. First, this study is primarily concerned with the implications of delaying postsecondary education as compared to directly enrolling; so examining shorter-term delay was more appropriate. Excluding individuals over the age of 24 years simultaneously capped the maximum length of delay to seven years. Second, for many of the variables of interest in this study, specifically those related to academic background, data were only collected for those under age 24. Restricting the analytic sample in this way retained 87% of the unweighted subjects in the study for a total of 13,060 respondents representing a weighted population of 2,739,244. Finally, because delay information is a critical outcome and predictor variable in this study, I performed listwise deletion in the 66 cases with missing data on the reason for delay. The cases deleted only made up 0.51% of the overall remaining sample; all 66 cases with missing data on the reason for delay reported delaying for two or more years. Dropping these final 66 cases reduced the unweighted analytic sample size to 12,990, allowing me to ultimately generalize to a population of 2,721,215 students representing approximately 73% of the BPS:04/09 population. Table 1 illustrates this restriction of the analytic sample.

Table 1

Unweighted and Weighted Sample Counts for Selection Criteria and Resultant Analytic Samples

	Unweighted N	**Weighted N**
Total number of students in BPS:04/09	16,680	3,746,295
Number of students who graduated from high school in the U.S.	14,960	3,304,827
Number of students who graduated from high school in the U.S. and are under age 24	13,060	2,739,244
Number of students under age 24 who graduated from high school in the U.S. and if delayed, indicated their reason for delaying	12,990	2,721,215

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: Figures weighted using WTB000 & WTB001-WTB200.

Variables

In order to explore the ways in which student characteristics varied based on delay reasons, I disaggregated the delayers in several different ways according to their indicated reasons. Because taking a gap year was not one of the available reasons on the survey, I used variables to construct a "gap year" proxy variable (explained in detail below). To date, no peer-reviewed studies have disaggregated students by their reasons for delaying. First, students in the analytic sample were compared based on whether or not they delayed. Second, students were compared based on timing of postsecondary entrance, including: no delay (entered immediately following high school), delayed for one year, or delayed for two or more years. The data set also included six "delay reason" variables where students could indicate delaying for any combination of the following reasons – work, military, marriage or family responsibilities, health problems, travel, or other reasons. As the six delay reason choices were not mutually exclusive, there were a total of 64 different delayer profiles, 45 of which were represented within the sample. In this study, I specifically examined students who indicated delaying for work and for travel and compared those students to immediate enrollers as well as non-work and non-travel delayers.

Finally, Jones (2004) in his *Review of the Gap Year Provision* specifies that a gap year may be comprised of any of the following activities, taking place either domestically or internationally and in a structured or unstructured way: organized travel, independent travel, learning, paid work, voluntary work, or leisure activities. In an effort to separately

capture students who had delayed expressly for the purpose taking gap year (rather than for such reasons as health, having a family, or joining the military), I selected six of the delayer profiles that most closely aligned with "gap year" reasons. I then examined students within these groups that delayed for one year: travel only, travel + other, travel + work, travel + work + other, work only, and work + other. Additionally the average time delayed for students by characteristics is also utilized. Throughout this study, I intentionally use quotations around the word "gap year" to denote that this grouping is presently a hypothesized identification of actual gap year participants.

Appendix A includes the full list of variables used in this analysis. Aligning with many of the categories within Perna's (2006) model and several of the same independent variables used in previous studies, this study accounted for students' pre-college characteristics such as gender, race, income, parents' place of birth, and parents' marital status and highest level of education. Students' high school academic achievement and preparation are described using indicators of high school type, highest level of math taken, grade point average (GPA) and admissions test score. Though not a measure of preparation, high school type was used as a proxy for student-to-teacher ratio, which is intended to be an indicator of institutional agents and social capital (Perna, 2006). According to the Institute of Education Sciences, the average student-to-teacher ratio is 10.7 to 1 in private schools (Education, 2010) and 16 to 1 in public schools (Education, 2012). Additionally, students are described in terms of their enrollment choices and degree expectations during their first year at school.

Missing Data

There were very small proportions of missing data (ranging from 1% - 14%). In particular, there were only missing or unknown data on four of the predictor variables: parents' marital status, parents' highest level of education, highest level of high school math taken, and admissions test score (SAT or ACT). However, these data were not missing at random (NMAR). On several of the variables subjects indicated that the questions and/or the provided answer options were inappropriate. All missing data information is provided in Appendix B. In particular, parents' marital status was not asked for with students declared as "independents." Thus the variable specifying parents' marital status had 8.5% missing values because the question was not asked to that portion of the sample. In the case of parents' highest level of education, 1% of the analytic sample indicated that they did not know their parents' highest level of education, which may have been a result of a variety of different circumstances – both known and unknown. For example a small percentage of the students reporting they did not know their parents' highest level of education were orphans (as illustrated in "orphan" variable).

Regarding academic preparation and achievement variables, 13.4% of the sample chose the option "none of these" when asked to indicate their highest level of high school mathematics based on four other options (Algebra 2, Trigonometry/Algebra II, Precalculus, and Calculus). Although it is impossible to know for certain if the students' highest level of math was below the Algebra 2 level, above the Calculus level, or in another branch of mathematics such as statistics, descriptive statistics showed that students who indicated "none of these" had lower levels of other academic preparation

and achievement. Specifically, while 16.7% of the entire weighted sample had missing data on their postsecondary admissions test score (SAT or ACT), 42.4% of those who indicated "none of these" as their highest level of high school math had missing data on their admissions test. Within the overall weighted sample of those who took an admissions test, 24.1% scored in the lowest quartile (a derived score between 400 and 870 points on the SAT), as compared to 34.0% of students who indicated "none of these" as their highest level of high school math. With respect to the three high school GPA categories (below 3.0, 3.0–3.4, and 3.5–4.0), the weighted sample was fairly evenly distributed with about one third of students in each category. However, of the students that specified taking "none of these" math courses in high school, 56.2% had a GPA below 3.0 and only 12.4% had a GPA between 3.5–4.0. Additionally, only 5.1% of the "none of these" math course group attended private school as compared to 9.9% of the entire sample, and only 10.1% of them had Advanced Placement credits accepted by their postsecondary institution as compared with 20.0% of the entire sample.

Fourteen percent of the analytic sample had missing data on admission test score (ACT or SAT). A cross tabulation of admissions tests scores with the variable "SAT or ACT exams taken" indicated that those with missing data "did not take the SAT or ACT" exam, rather than did not report the score. To determine if students not having taken an admissions test was random, or normally distributed across other variables, I ran several cross-tabulations. Results showed that students who did not take the SAT or ACT had lower levels of academic preparation and achievement than students who had taken the test. Specifically, a smaller proportion of non-test takers had GPAs between 3.5 and 4.0 and had attended private schools as compared to those who had taken an admissions test.

Because the data missing were not missing at random (MAR) or missing completely at random (MCAR), but instead intentionally skipped for specific reasons, I created additional categories for each categorical variable to describe the associated reasons. For example, since missing data on the admissions test score was a result of not having take an admissions test, I created a fifth category for "did not take test" when examining students by their admissions test quartile. In my analysis of the predictors of delaying for different reasons presented in this paper, not having taken an admissions test as compared to scoring in the lowest quartile was a significant predictor of delaying both in general and specifically for one year for either work and/or travel. This affirmed my decision to create a separate category for those who did not take the test. This method is also referred to as dummy-variable adjustment (Allison, 2009), where a dummy variable is included to indicate whether or not the data is missing on that specific predictor, and all dummy variables are included as predictors in the model. This method is used when data are missing because the question cannot be answered or is inappropriate, as indicated in the cases above.

Analytic Methods

All data were analyzed using Stata 12. Because BPS:04/09 generated weighted, complex survey data, the "svy" command and procedure was utilized as it explicitly declares the data to be complex survey data. Additionally, the analysis weight WTB000 was used because this study of postsecondary delay utilizes the longitudinal nature of the BPS data set, focusing specifically on the panel respondents. The analysis weight applies only to students who responded to all three waves of the study: NPSAS:04, BPS:04/06,

and BPS:04/09 (Wine et al., 2011). Then, bootstrap variance estimation was employed with the replicate weight variables WTB001 – WTB200.

The first research question in this study involved examining the ways in which students delayed based on their reported reasons for delaying and length of time spent delaying. All of the delay variables in the dataset were utilized and a separate variable for the delayer profile was created. To answer the second research question, which examined the student characteristics associated with delaying for different reasons, five comparisons were made. First, I examined differences between students who delayed and those who did not delay. Then, I disaggregated delayers by their delay length and whether or not they worked, traveled or delayed for a "gap year" and compared those groups to immediate enrollers and other delayers who *did not* work, travel, or take a "gap year." Frequency tables and cross-tabulations were used along with chi-square tests for each categorical variable to determine any significant differences. T-tests and linear regressions[2] were also used to test for differences in average delay lengths associated with the different student categories. Finally, logistic and multinomial logistic regressions were used to predict different types of delay participation. A threshold of $p < .05$ is used throughout the analyses.

Because of the constraints associated with using "svy" mode in Stata, goodness-of-fit tests on weighted data were performed using the "estat gof" command, which reports a goodness-of-fit test for binary response models using survey data in the form of

[2] Because the Stata survey mode does not allow for analyses of variance (ANOVAs), linear regressions were used to determine differences between subgroups. Posthoc tests were not used to simplify readability of the tables.

an F-test. In order to obtain Pseudo R^2 and Percent Classified Correctly statistics, unweighted models were used.

Limitations

There are several limitations to these data and the collection methods used in this study. First, I restricted the sample to those FTBs under the age of 24, which does not allow for examination of postsecondary delay practices on older learners and returners. Despite increasing interest in adults returning to college, this study was designed to focus on delay patterns of students of traditional college-enrollment ages. The results of this study would likely be greatly varied if older learners were introduced. As this study is a secondary analysis, it is limited to the use of variables available in the BPS:04/09 dataset. While NPSAS:04 asked students questions related to their length of and reason for delay, the survey was not designed specifically to investigate questions related to delay choice or motivations for delay. Additionally, because information collected on delay behavior was collected at the same time as the institutional and enrollment characteristic data, it is unclear as to the sequence in which those choices occurred. Specifically, it is impossible to discern if delay was planned or intentional, or whether for a delayer, the decision to enroll was preceded by an initial decision to not enroll. Because the intentionality of the delay decision is a critical component of a gap year delay, truly identifying the gap year participants in this data set is not possible. Also, this data set does not contain information on students who never enrolled in postsecondary education, making comparisons of between delayers and non-enrollers impossible. A final critical limitation is that because of the cross-sectional nature of the data, causality could not be

determined. Specifically, it was unclear whether delay caused or was a consequence of the various attitudes and outcomes.

Findings

Research Question 1: The Empirical Characteristics of Postsecondary Delay Practices

Within the analytic sample of U.S. high school graduates under the age of 24 who were first-time beginners in the 2003-04 academic year, 17.0% of students delayed their entrance for some period of time while 83.0% entered postsecondary education directly following high school. The group of delayers, who represented a weighted sample size of 462,683 students (and a total of 1,690 unweighted observations), can be described in several ways. Delayers indicated up to six reasons for delaying. These reasons were not mutually exclusive of one another, meaning that students who indicated delaying for travel may also have indicated delaying for work as well, or any combination of the provided reasons.

Table 2 shows the number of students who indicated delaying for each reason followed by their proportional representation among the sample and among just the delayers.

Within the analytic sample, a weighted proportion of 8.2% of the population, indicated delaying for a period of one year. These data indicate that almost half of all delayers in the sample did so for just one year, while the other half waited somewhere between two and eight years (meaning that some students graduate high school at age 16). Among the six delay reason options available for indication in the survey, delaying for work was the most common. Overall, 14.6% of the sample reported delaying for the

purpose of working, representing 86.1% of all delayers. Following work, delaying for health problems and travel were the next most common reasons for delaying. Among the entire sample, 5.0% of all students delayed for travel. This indicates that nearly 30% of all delayers indicated that travel was a component of their delay. Among the entire sample, 5.0% of students delayed for a "gap year" reason, representing about 30% of all delayers.

Table 2

Distribution of Delayers by Reason Among 2003-2004 First-Time-Beginners

	Weighted N	Percentage of Sample	Percentage of Delayers
Delayed (All)	462,683	17.0%	100.0%
Delayed: 1-Year	223,476	8.2%	48.3%
Delayed: Worked	398,370	14.6%	86.1%
Delayed: Served in Military	39,791	1.5%	8.6%
Delayed: Married or Family Responsibilities	87,910	3.2%	19.0%
Delayed: Health Problems	139,268	5.1%	30.1%
Delayed: Traveled	136,491	5.0%	29.5%
Delayed: Other Reasons	41,641	1.5%	9.0%
Delayed: "Gap Year" Reasons	137,417	5.0%	29.7%

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: (a) Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation. (b) "Gap year" reasons are travel only, travel + other, travel + work, travel + work + other, work only, and work + other for one year.

Delayers could indicate up to six reasons for delaying;

Table 3 shows that the majority of delayers indicated only one reason for delaying (43.2%). Generally, it was more common to indicate fewer reasons for delaying, as 37% of delayers indicated two reasons, 14% indicated three reasons, 4% indicated four reasons, and only 1% indicate five reasons. No one reported delaying for all six reasons.

Table 3

Number of Reasons Indicated for Delaying Among 2003-2004 First-Time-Beginners

Number of Reasons	Weighted N	Percentage of Sample	Percentage of Delayers
1	199,977	52.4%	43.2%
2	172,976	33.5%	37.4%
3	65,542	11.5%	14.2%
4	19,512	2.5%	4.2%
5	4,676	0.0%	1.0%
Total	2,721,215	17.0%	100.0%

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: (a) Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation.

Of all of the combinations of reasons students indicated for delay, seven emerged as the most common and included 76% of all delayers.

Table 4 shows the prevalence of the most common delay profiles. Thirty-four percent of all delayers reported delaying only for work and 13.2% reported delaying for work and travel, which were both classified under "gap year" reasons. The remaining four most common delayer profiles were not classified as "gap year" reasons.

Table 4

Most Common Delayer Profiles Among 2003-2004 First-Time-Beginners

Delay Reasons	N	Percentage of Sample	Percentage of Delayers	Gap Year Reason?
Work	155,308	5.7%	33.6%	Yes
Work + Travel	61,233	2.3%	13.2%	Yes
Work + Health	52,615	1.9%	11.4%	No
Work + Married/Family	25,197	0.9%	5.4%	No
Work + Married/Family + Health	21,560	0.8%	4.7%	No
Work + Married/Family + Travel	20,247	0.7%	4.4%	No
Other	14,008	0.5%	3.0%	No
Total	350,168	13%	76%	

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation.

In summary, based on the analytic sample, 17% of all 2003-04 first-time-beginners delayed their entrance to postsecondary education and over half of those students specified only one reason for their delay. Working was the most commonly cited reason for delaying, with 86.1% of all delayers reporting to have worked during their delay and 33.6% of delaying students reporting they delayed only to work. In addition, 29.5% of delayers indicated traveling, 52.6% reported delaying for reasons profiled as "gap year" reasons, and 29.7% reported delaying one year for "gap year" reasons.

Research Question 2: Characteristics of Students Based and Delay Practices

Average lengths of delay for delayers only. Among delayers, average length of delay varied by student characteristics, with a sample mean of 2.10 years and a range of one to eight years. Delay length was not normally distributed as approximately 50% of delayers in the sample delayed for only one year. Table 5 displays the average length of delay associated with different student. Using the Stata 12 mode specified for complex survey data, regression analyses were preformed to test for significant differences in the average delay length for students within each category. Because the t-test option is not available in survey mode, linear regression using dummy variables revealed differences in the mean delay length related to each of the subgroups within each student characteristic. The results are presented with asterisks beside the variables, indicating at least one significant difference between subgroups within that characteristic.

An examination of pre-college characteristics revealed that there were no differences between delay lengths for males and females. As far as race, Asian students had the shortest average delay time (1.66 years), second to white students (2.03 years). Black or African Americans students had the longest average delay times (2.33 years).

Independent students had a significantly longer average delay length (2.83 years) than students with married or remarried parents (1.70 years). There were no differences in the delay lengths of students based on parents' education level, high school type attended, or high school GPA. However, having taken higher levels of high school math was associated with shorter average delay lengths. Similarly, the higher one's admissions test score quartile was, the shorter the average delay length. There was also a significant inverse relationship between income quartile and delay length, with students in the lowest quartile experiencing average delays of 2.25 years, and students in the highest quartile experiencing average delays of 1.55 years.

In terms of enrollment choice, there were several differences. Students who were enrolled exclusively part-time during their first year delayed longer (2.24 years) than those who enrolled exclusively full-time (2.02 years) or as a mix between full-time and part-time (2.05 years). Students who enrolled in private, not-for-profit institutions delayed an average of 1.65 years, while students in public four-year institutions delayed an average of 1.75 years, and students in public two-year institutions delayed an average of 2.12 years. Students at other institution types delayed longer (average = 2.33 years). Finally, with respect to academic postsecondary outcomes, students who completed a bachelor's degree by 2009 had delayed an average of 2.05 years – significantly lower than students who had not completed a bachelor's degree (2.15 years).

Table 5

Average Number of Years Spent Delaying for 2003-04 FTBs Younger Than 24

Student Characteristic	Mean	Std. Err.	Student Characteristic	Mean	Std. Err.
All Delayers	2.10	0.05	Parents' marital status***		
Delayed: 1 Year	1.00	0.00	Single, divorced, separated, widowed	1.85	0.09
Delayed: 2 or more years	3.13	0.06	Married/remarried	1.70	0.06
Delayed: Worked	2.09	0.06	N/A - student is independent	2.83	0.09
Delayed: Did not work	2.18	0.12	Parents' have a bachelor's degree		
Delayed: Traveled	2.10	0.09	No	2.11	0.06
Delayed: Did not travel	2.10	0.06	Yes	2.04	0.09
Background Demographics Variables			Unsure	2.54	0.26
Gender			High school type attended		
Female	2.18	0.07	Public	2.11	0.06
Male	1.99	0.07	Private	1.87	0.13
Race/ethnicity**			***Academic Preparation and Achievement Variables***		
White	2.03	0.07	Highest level of high school mathematics*		
Black or African American	2.33	0.12	None of these	2.29	0.10
Hispanic or Latino	2.00	0.13	Algebra 2	2.15	0.08
Asian	1.66	0.16	Trigonometry/Algebra II	1.98	0.11
All other	2.53	0.22	Pre-calculus	1.81	0.16
Respondents income group in 2004**			Calculus	1.85	0.16
Low	2.25	0.07	High school grade point average (GPA)		
Low Middle	2.16	0.12	Less than 3.0	2.19	0.07
High Middle	1.95	0.13	3.0-3.4	2.13	0.08
High	1.55	0.09	3.5-4.0	1.80	0.12
Parents Born in the US			Admissions test scores quartile***		
Both parents born in the US	2.13	0.06	Did not take ACT or SAT	2.34	0.08
One parent born in the US	1.98	0.21	Lowest (less than 850)	2.08	0.09
Both parents not born in the US	2.00	0.13	Low Middle (860-990)	1.80	0.12
			High Middle (1000-1130)	1.95	0.15
			Highest (1140-1600)	1.63	0.16

Student Characteristic	Mean	Std. Err.
Enrollment and Expectation Variables		
Attendance intensity 2003-04***		
Exclusively full-time	2.02	0.06
Exclusively part-time	2.24	0.10
Mixed full-time and part-time	2.05	0.15
First institution sector and control 2003-04***		
Public 4-year	1.75	0.12
Private non-for-profit 4-year	1.65	0.14
Public 2-year	2.12	0.07
Other	2.33	0.11
Highest degree ever expected		
Less than a bachelor's degree	2.31	0.13
Bachelor's degree	2.05	0.06
More than a bachelor's degree	2.05	0.08
Weighted N	462,683	
Unweighted N	1,690	

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation.

Results of regression analyses for weighted sample – *p < .05, **p < .01, ***p < .001

! Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.

!! Interpret data with caution. Estimate is unstable because the standard error represents more than 50 percent of the estimate.

‡ Reporting standards not met.

Cells with fewer than 3 students not reported

Rounds to zero.

Characteristics of students based on delay behavior. An analysis of student characteristics associated with different delay reasons, using cross-tabulations and chi-squared tests, showed several significant differences. Table 6 shows the proportion of students within each delay category representing different student characteristics. On the left, the first column displays the characteristics of students who did not delay. The following column shows the characteristics of students who delayed in general. As the table moves to the right, the group of delayed students is disaggregated in four different ways. First, students are compared based on their length of delay – either one year or two or more years. Then, students are compared based on whether or not they participated in a work, travel or "gap year" delay. The column groupings represent whether a delaying student delayed for the specified reason (yes) or not (no). The final column displays the distribution of student characteristics for the entire sample.

Above each column group, asterisks display the results of chi-square or t-tests for the pair of student groups (e.g., delayers vs. immediate enrollers, or 1-year delayers vs. 2+ year delayers). For the remaining four delay categories, differences reported are among delayers and indicate significant differences between those who delayed for that reason and those who delayed but not for that reason. In the following subsections, I examine the background characteristics, academic preparation and achievement, enrollment and expectation choices, and postsecondary outcomes of students based on their delay behavior.

Table 6

Characteristics of Students Based on Delay Behavior

			Delay (All)								
	No	Delay	Length		Worked		Traveled		"Gap Year"		
Student Characteristics	Delay	(All)	1-Yr	2+Yr	Yes	No	Yes	No	Yes	No	Total
Gender							***		**		
Female	0.56	0.57	0.55	0.59	0.57	0.58	0.44	0.63	0.48	0.61	0.56
Male	0.44	0.43	0.45	0.41	0.43	0.42	0.56	0.37	0.52	0.39	0.44
Race/ethnicity	***		*		**		**		***		
White	0.66	0.55	0.57	0.53	0.58	0.41	0.63	0.52	0.67	0.50	0.64
Black or African American	0.11	0.18	0.15	0.21	0.18	0.23	0.12	0.21	0.08	0.23	0.12
Hispanic or Latino	0.13	0.17	0.19	0.16	0.16	0.24	0.16	0.18	0.18	0.17	0.14
Asian	0.05	0.03	0.04	0.02	0.02	0.07	0.05	0.02	0.04!	0.03	0.05
All other	0.05	0.06	0.04	0.08	0.06	0.05!	0.04!	0.07	0.04	0.07	0.05
Respondents income group in 2004	***		**				***		***		
Low	0.23	0.47	0.40	0.53	0.45	0.58	0.35	0.52	0.35	0.52	0.27
Low Middle	0.26	0.26	0.27	0.25	0.27	0.20	0.31	0.24	0.30	0.24	0.26
High Middle	0.27	0.16	0.17	0.14	0.16	0.13	0.19	0.14	0.19	0.15	0.25
High	0.25	0.11	0.15	0.08	0.12	0.10	0.15	0.10	0.16	0.10	0.22
Parents Born in the US											
Both parents born in the US	0.79	0.77	0.74	0.79	0.78	0.68	0.79	0.76	0.76	0.77	0.79
One parent born in the US	0.07	0.08	0.09	0.07	0.07	0.11	0.07	0.08	0.08	0.07	0.07
Both parents not born in the US	0.14	0.16	0.17	0.15	0.15	0.22	0.14	0.17	0.16	0.16	0.15
Parents' marital status	***		**		**		*		***		
Single, divorced, separated, widowed	0.27	0.24	0.28	0.20	0.25	0.14	0.25	0.23	0.28	0.22	0.26
Married/remarried	0.70	0.44	0.57	0.31	0.44	0.44	0.49	0.41	0.65	0.34	0.65
N/A - student is independent	0.04	0.32	0.15	0.48	0.31	0.42	0.25	0.35	0.07	0.43	0.08
Parents' have a Bachelor's Degree	***				**		***				
No	0.52	0.67	0.66	0.68	0.68	0.62	0.60	0.70	0.65	0.68	0.55
Yes	0.46	0.30	0.32	0.28	0.30	0.31	0.39	0.26	0.33	0.29	0.44

Unsure	0.02	0.03	0.02	0.04	0.02	0.07	0.01!	0.04	0.02!	0.04	0.02
			Delay (All)								
	No	Delay	Length		Worked		Traveled		"Gap Year"		
Student Characteristics	Delay	(All)	1-Yr	2+Yr	Yes	No	Yes	No	Yes	No	Total
Academic Preparation and Achievement Variables											
High school type attended	***										
Public	0.89	0.94	0.93	0.95	0.95	0.90	0.94	0.94	0.94	0.94	0.90
Private	0.11	0.06	0.07	0.05	0.06	0.10	0.06	0.06	0.06	0.06	0.10
Highest level of high school math	***		**								
None of these	0.11	0.26	0.22	0.29	0.27	0.19	0.23	0.27	0.24	0.26	0.13
Algebra 2	0.28	0.40	0.38	0.42	0.40	0.42	0.39	0.41	0.35	0.42	0.30
Trigonometry/Algebra II	0.18	0.16	0.18	0.15	0.17	0.15	0.18	0.16	0.18	0.16	0.18
Pre-calculus	0.24	0.12	0.16	0.09	0.12	0.15	0.13	0.12	0.16	0.11	0.22
Calculus	0.19	0.06	0.06	0.05	0.05	0.10	0.07	0.05	0.07	0.05	0.17
High school grade point average (GPA)	***										
Less than 3.0	0.28	0.49	0.46	0.52	0.49	0.47	0.46	0.50	0.43	0.52	0.32
3.0-3.4	0.36	0.33	0.35	0.32	0.32	0.39	0.32	0.33	0.36	0.32	0.35
3.5-4.0	0.36	0.18	0.20	0.16	0.18	0.14	0.22	0.16	0.21	0.17	0.33
Admissions test scores quartile	***		***						***		
Did not take ACT or SAT	0.12	0.40	0.32	0.47	0.39	0.43	0.35	0.41	0.28	0.44	0.17
Lowest (less than 850)	0.23	0.28	0.29	0.27	0.28	0.30	0.25	0.30	0.29	0.28	0.24
Low Middle (860-990)	0.23	0.16	0.20	0.13	0.17	0.10	0.20	0.15	0.21	0.14	0.22
High Middle (1000-1130)	0.21	0.11	0.12	0.09	0.11	0.09	0.14	0.09	0.13	0.10	0.19
Highest (1140-1600)	0.20	0.05	0.07	0.03	0.05	0.08!	0.06	0.05	0.09	0.04	0.18
Enrollment and Expectation Variables											
Attendance intensity 2003-04	***				*						
Exclusively full-time	0.80	0.55	0.58	0.53	0.54	0.65	0.52	0.57	0.56	0.55	0.75
Exclusively part-time	0.09	0.35	0.31	0.38	0.36	0.24	0.37	0.34	0.32	0.36	0.13
First institution sector and control	***		***				***		**		
Public 4-year	0.39	0.13	0.16	0.09	0.12	0.16	0.15	0.11	0.16	0.11	0.34
Private non-for-profit 4-year	0.19	0.05	0.07	0.04	0.05	0.07	0.05	0.05	0.06	0.04	0.17
Public 2-year	0.34	0.59	0.58	0.60	0.61	0.50	0.65	0.57	0.63	0.58	0.38

Other	0.08	0.23	0.19	0.27	0.23	0.27	0.15	0.27	0.15	0.27	0.11

			Delay (All)								
	No	Delay	Length		Worked		Traveled		"Gap Year"		
Student Characteristics	Delay	(All)	1-Yr	2+Yr	Yes	No	Yes	No	Yes	No	Total
Highest degree ever expected	***										
Less than a Bachelor's degree	0.07	0.19	0.16	0.21	0.19	0.19	0.15	0.20	0.14	0.21	0.09
Bachelor's degree	0.30	0.36	0.35	0.38	0.37	0.30	0.34	0.38	0.37	0.36	0.31
More than a Bachelor's degree	0.63	0.45	0.49	0.41	0.44	0.50	0.51	0.42	0.49	0.43	0.60

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation.
Column proportions reported. Results of chi-square tests for weighted sample – *p < .05, **p < .01, ***p < .001
Results of regression analyses for weighted sample – *p < .05, **p < .01, ***p < .001
! Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.
!! Interpret data with caution. Estimate is unstable because the standard error represents more than 50 percent of the estimate.
‡ Reporting standards not met.
Cells with fewer than 3 students not reported
Rounds to zero.

Background characteristics. There were no differences in the gender distributions between delayers and immediate enrollers overall, but when delayers were disaggregated several differences emerged. While males represented 44% of the sample, among delayers, they represented 56% of travel delayers and 52% of "gap year" delayers. Every way in which delayers were disaggregated (work vs. no work, travel vs. no travel), there were differences related to race. Delayers had a higher proportion of both Black or African American (18%) and Latino (17%) students than did immediate enrollers (11%, 13% respectively). Among delayers, non-working delayers had the highest proportion of Black or African American (23%) and Latino (24%) students. "Gap year" delayers had the highest proportion of White students (67%).

There were differences between immediate enrollers and delayers based on their income group. While the immediate enrollers were fairly evenly spread across the four quartiles, 73% of delayers fell into the lowest two income quartiles. Among delayers, there were income differences between those who delayed for one year as compared to those delaying for two or more years and between students who delayed for travel and a "gap year" and those who did not. Specifically, there was a higher proportion of two-or-more-year delayers in the lowest two income quartiles (78%) as compared to one-year delayers (67%). Similarly, 66% of travel and 65% of "gap year" delayers were in the lowest two income categories as compared to 76% of both non-travel and non-"gap year" delayers.

There were significant differences between delayers and immediate enrollers, as well as between delayers, in terms of parents' marital status and students' dependency status. Across the entire sample, 8% of students were financially independent from their

parents; however, only 4% of immediate enrollers were independent as compared to 32% of delayers. Independent students represented 48% of two-or-more year delayers, 42% of non-working delayers, and 35% of non-travel delayers. Students whose parents had not earned a bachelor's degree represented a higher share of delayers (67%) than immediate enrollers (52%).

Academic preparation and achievement. Immediate enrollers and delayers were different across every measure of academic preparation and achievement. A higher proportion of immediate enrollers (11%) attended private schools and took pre-calculus or calculus in high school (43%) as compared to delayers (6%, 18% respectively). While 36% of immediate enrollers had GPAs between 3.5-4.0 as compared to only 18% of delayers. Additionally, 41% of immediate enrollers had admissions test scores above the median as compared to only 16% of delayers. There were few academic preparation and achievement differences based on length of delay or reason for delay. A higher proportion of one-year delayers (22%) took pre-calculus or calculus in high school as compared to 14% of two-or-more-year delayers. In terms of admissions test scores, 19% one-year delayers as compared to 12% of two-or-more-year delayers scored above the median. Twenty-one percent of travel delayers scored above the median as compared to only 14% of non-travel delayers.

Enrollment and expectations. Immediate enrollers and delayers were also different across their enrollment and expectation characteristics. A higher proportion of immediate enrollers were enrolled full-time (80%) as compared to delayers (55%). Similarly, a higher proportion of immediate enrollers were enrolled in public 4-year institutions (39%) and private non-for-profit institutions (19%) as compared to delayers

(13% and 5%, respectively). Finally, 63% of immediate enrollers expected to attain more than a bachelor's degree as compared to only 45% of immediate enrollers.

Among delayers, a smaller proportion of work delayers (54%) enrolled exclusively full-time during their first year as compared to non-work delayers (65%). A higher proportion of one-year delayers attended four-year institutions, both public (16%) and private (7%), than did two-or-more year delayers (9% and 4% respectively). Similarly, a higher proportion of travel delayers and "gap year" delayers attended 4-year institutions.

Summary. These data confirm many previous findings with respect to differences between delayers and immediate enrollers. In general, as compared to immediately enrollers a smaller proportion of delayers were from higher income groups, had married or remarried parents, and had at least one parent with a bachelor's degree. In terms of high school academic preparation and achievement, as compared to immediate enrollers, a smaller proportion of delayers had attended private school, taken pre-calculus or calculus, achieved higher GPAs and scored above the median on their admission test. Finally, in terms of enrollment practices, as compared to immediate enrollers, a higher proportion of delayers attended two-year and for-profit institutions and expected to complete less than a bachelor's degree. An additional finding of this study is that there were no significant differences observed in the gender distributions of delayers and immediate enrollers, which differs from previous studies that have reported that males represent a higher percentage of delayers than immediate enrollers (Hearn, 1992; Rowan-Kenyon, 2007).

Beyond extending the understanding of differences between immediate enrollers and delayers, this study revealed variation in characteristics among delayers based on their timing and reason for delaying. Compared to those who delayed for two-or-more years, one-year delayers tended to be white, from higher income groups, financially dependent, enrolled in four-year institutions, and to have married or remarried parents and have taken higher levels of math in high school. As compared to those who delayed for non-work reasons, work delayers tended to be white and financially dependent. Additionally, work delayers tended to attend postsecondary education exclusively part-time and have parents without a bachelor's degree. As compared to non-travel delayers, travel delayers tended to be male, white, financially dependent, and from higher income groups. They also tended to have married parents, to have parents with a bachelor's degree and to be enrolled in public institutions. Similarly, as compared to non-"gap year" delayers, "gap year" delayers tended to be male, white, financially dependent, enrolled in a public institution, from higher income groups, as well as to have married parents and have scored above the median on their admissions test. These patterns suggest that among delaying students, one-year, travel, and "gap year" delayers come from comparatively higher income backgrounds and have had higher levels of academic preparation and achievement.

Research Question 3: Predictors of Postsecondary Delay

The third research question asked which student background and academic characteristics predicted delay participation. Table 7 shows the predictors of delaying in general (for the analytic sample), as well as the predictors of delaying for specific reasons (for the population of delayers) as reported from logistic and multinomial logistic

regression models. The reference categories are italicized in the table. At the bottom of the table, several model statistics are reported. For goodness-of-fit tests reported for the weighted data, none of the F-tests were significant, indicating that the models fit the data. The null hypothesis was that the model fit the data, so a non-significant F-test indicated an inability to reject the null hypothesis. According to the analyses performed on the unweighted data to determine the percent correctly classified, the final unweighted model correctly classified delayers in the general population 88.77% of the time. Then, among delayers, the model correctly classified one-year delayers 65.80% of the time, work delayers 85.17% of the time, travel delayers 69.29% of the time, and "gap year" delayers 72.42% of the time.

Predictors of delaying as compared to enrolling immediately. When controlling for other variables in the model, several pre-college characteristics predicted delaying in general as compared to enrolling immediately. The odds of delaying in general were higher for students who were male than female (OR[3]=1.19), financially independent (OR=8.53) as compared to dependent with single, divorced or separated parents, and who did not take Algebra 2 (OR=1.26) or an admissions test in high school (OR=2.20). The odds were lower for students who were Hispanic or Latino as compared to white (OR=.77), who took Pre-calculus (OR=.66) or Calculus (OR=.52) as compared to Algebra 2 in high school and scored in progressively higher admissions test quartiles (low middle OR=.77, high middle OR =.67, and high OR = .49).

Among delayers, predictors of delaying for different reasons. When controlling for all of the pre-college variables in the model, pre-college characteristics

[3] OR = "Odds Ratio" of weighted logistic regression, controlling for other pre-college characteristics

including both demographics and academic preparation and achievement measures predicted several of the reasons for which students delayed. In each case, given a particular reason for or length of time of delay, students delaying for that reason were examined and compared to students delaying, but not for that reason. In terms of gender, being male was associated with higher odds of delaying for travel (OR=1.96). As compared to being White, being Black was associated with lower odds of delaying for a "gap year" (OR=.32). Being Asian was associated with lower odds of delaying for work (OR=.31) but higher odds of delaying for travel (OR=2.54). Compared to being in the lowest income group, being in the low middle and high middle groups was associated with lower odds of delaying for one year (OR=.62 and OR=.55). As compared to being in the low income group, being in the low middle, high middle, and high income groups was associated with lower odds of taking a "gap year" (OR=.22, OR=.28, OR=.36 respectively). Being independent as compared to dependent with one parent was associated with lower odds of delaying for one year (OR=.20), for work (OR=.47), and for a "gap year" (OR=.11). Having married or remarried parents as compared to (a) single parent(s) was associated with lower odds of delaying for work (OR=.51) but higher odds of delaying for a "gap year" (OR=1.63).

When controlling for all other characteristics in the model, few academic preparation and achievement variables predicted different delay choices. However, having attended private school as compared to public school was associated with lower odds of delaying for work (OR=.51). Finally, not having taken the SAT or ACT as compared to scoring in the lowest quartile was associated with lower odds of delaying for one year (OR=.64) and lower odds of delaying for a "gap year" (OR=.54).

Among delayers, some patterns emerged with respect to the characteristics that predicted specific delay choices. When controlling for other variables in the model, delay length was predicted by income, dependency status, and the admissions test. The odds of delaying for one year as compared to two or more years were lower for students in the lower- and upper-middle income groups as compared to the lowest, for students who were financially independent, and for students who did not take an admission test. When controlling for other variables in the model, delaying for work was predicted by race, income, dependency status, and high school type attended. The odds of delaying for work were lower for Asian students, those with married or remarried parents, those who were financially independent, those who were unsure of parents' educational status, and those who had attended private school. When controlling for other variables in the model, delaying for travel was predicted by gender and race, with the odds higher for male and Asian students. Finally, when controlling for other variables in the model, delaying for "gap year" reasons was predicted by race, income, parent's marital status and dependency status, and the admissions test. The odds of delaying for a "gap year" were lower for Black students, students from higher income groups, those who were financially independent, and those who did not take an admission test. Having married or remarried parents as compared to single parents was associated with higher odds of delaying for a "gap year."

Table 7

Predictors of Delaying as Compared to Not Delaying and Among Delayers, Predictors of Delaying for Different Reasons (Weighted)

			Delayed: Reason (*Delayed: Not Reason*)							
	Delay (All)		1-Year		Worked		Traveled		"Gap Year"	
	Odds Ratio	(SE)	Odds Ratio	(SE)	Odds Ratio	(SE)	Odds Ratio	(SE)	Odds Ratio	(SE)
Background Demographics Variables										
Gender *(Female)*										
Male	1.19 *	(.10)	0.94	(.17)	0.99	(.19)	1.96 ***	(.18)	1.34	(.19)
Race/ethnicity *(White)*										
Black or African Am.	0.97	(.14)	0.93	(.22)	0.66	(.25)	0.61	(.33)	0.32***	(.25)
Hispanic or Latino	0.77 *	(.15)	1.54	(.25)	0.59	(.32)	1.10	(.29)	0.99	(.31)
Asian	0.80	(.28)	1.32	(.50)	0.31**	(.45)	2.54 *	(.42)	0.72	(.53)
All other	1.01	(.22)	0.66	(.34)	0.83	(.50)	0.65	(.59)	0.58	(.34)
Income group 2004 *(Low)*										
Low Middle	1.04	(.13)	0.62*	(.23)	1.44	(.31)	1.49	(.26)	0.60*	(.22)
High Middle	0.80	(.17)	0.55*	(.26)	1.44	(.31)	1.47	(.29)	0.43**	(.28)
High	0.85	(.19)	0.70	(.36)	1.57	(.47)	1.39	(.36)	0.45*	(.36)
Parents Born in US *(Both)*										
One parent born in US	1.12	(.21)	1.42	(.38)	0.68	(.39)	0.80	(.34)	1.19	(.42)
Both not born in US	1.21	(.16)	0.84	(.25)	1.01	(.31)	0.75	(.26)	0.76	(.30)
Parents' marital status *(Single, divorced, separated, widowed or deceased)*										
Married/remarried	0.90	(.10)	1.47	(.21)	0.51*	(.31)	0.80	(.22)	1.63*	(.20)
N/A - independent	8.53 ***	(.16)	0.20***	(.23)	0.47**	(.29)	0.87	(.25)	0.11***	(.33)
Parents' Have a Bachelor's Degree *(No)*										
Yes	0.90	(.11)	0.99	(.21)	0.86	(.27)	1.44	(.20)	0.97	(.20)
Unsure	1.12	(.34)	0.55	(.39)	0.38**	(.37)	0.47	(.75)	0.77	(.49)
Weighted N	2,721,215		462,683		462,683		462,683		462,683	

	Delay (All)		Delayed: Reason (*Delayed: Not Reason*)							
			1-Year		Worked		Traveled		"Gap Year"	
	Odds Ratio	(SE)	Odds Ratio	(SE)	Odds Ratio	(SE)	Odds Ratio	(SE)	Odds Ratio	(SE)
Academic Preparation and Achievement Variables										
High school type attended *(Public)*										
Private	0.91	(.16)	1.20	(.26)	0.51*	(.33)	0.87	(.32)	0.77	(.31)
Highest level of high school mathematics (*Algebra 2)*										
None of these	1.26 **	(.11)	0.88	(.22)	1.50	(.29)	0.94	(.22)	1.18	(.25)
Trig/Algebra II	0.87	(.12)	1.19	(.24)	1.07	(.30)	1.07	(.24)	1.26	(.29)
Pre-calculus	0.66 ***	(.16)	1.59	(.29)	0.72	(.36)	0.97	(.28)	1.37	(.33)
Calculus	0.52 ***	(.20)	0.87	(.32)	0.46	(.42)	1.10	(.37)	1.03	(.36)
High school GPA *(Less than 3.0)*										
Less than 3.0	0.74	(.19)								
3.0-3.4	0.62	(.19)	0.82	(.31)	1.01	(.36)	1.31	(.40)	0.98	(.36)
3.5-4.0			0.83	(.30)	0.94	(.40)	1.31	(.42)	1.05	(.36)
Admissions test scores (ACT or SAT) (*Lowest Quartile (less than 850)*										
Did not take ACT or SAT	2.20 ***	(.14)	0.64 *	(.19)	0.88	(.24)	0.98	(.22)	0.54*	(.24)
Low Middle (860-990)	0.77 *	(.15)	1.19	(.25)	1.83	(.36)	1.26	(.31)	1.09	(.28)
High Middle (1000-1130)	0.67 **	(.19)	1.00	(.28)	1.34	(.44)	1.26	(.30)	0.86	(.29)
Highest Quartile (1140-1600)	0.49 ***	(.26)	1.42	(.45)	0.82	(.48)	0.90	(.42)	1.41	(.42)
Weighted N	2,721,215		462,683		462,683		462,683		462,683	
Goodness-of-Fit F-test F(9,191)	0.63		1.06		0.39		0.52		0.30	
Unweighted N	12,990		1,690		1,690		1,690		1,690	
Pseudo R^2	0.22		0.09		0.04		0.05		0.13	
Percent Classified Correctly	88.77%		65.80%		85.17%		69.29%		72.42%	
Goodness-of-Fit Test (chi2)	5434.21*		1259.93		1261.09		1294.64		1255.20	

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation. Goodness-of-fit F-test reported for weighted data. Other model statistics reported for unweighted data due to constrains of Stata svy mode.

Results of logistic regressions for weighted sample – *p < .05**, p < .01, ***p < .001; OR = Odds Ratio; SE = Standard Error

Summary of Findings

This study presents several key findings. First, 17% of the analytic sample, which contained students under age 24 who graduated from high school in the U.S., delayed entrance to postsecondary education. Among the delayers, 48.3% delayed for one year, 86.1% delayed for work, 29.5% delayed for travel, and 29.7% delayed for a "gap year."

Second, this study confirms what prior studies have shown in that students who delay are different from immediate enrollers in terms of their pre-college characteristics, including: race, income, parents' marital status and highest level of education, high school type, highest level of high school math, high school GPA, admissions test score, and enrollment patterns (Bozick & DeLuca, 2005; Horn et al., 2005; Rowan-Kenyon, 2007). However, this study showed no differences in the gender distribution of delayers and immediate enrollers, which is different from previous studies that found that males were overrepresented among delayers (Hearn, 1992; Rowan-Kenyon, 2007). This study confirms preceding studies that show that students who delay are at an initial disadvantage in terms of income, family background including parents' maritial status and level of education, and academic preparation and achievement as compared to their non-delaying counterparts (Goldrick-Rab, 2010; Horn et al., 2005; Rowan-Kenyon, 2007).

Third, the multivariate analyses show that different delay behavior is predicted by gender, race, parents' marital status (and being financially independent), students' highest level of high school math taken, and admissions test score. Specifically, males are more likely to delay for travel. Higher income students are less likely to delay for one year or

"gap year" reasons. Financially independent students are less likely to delay for one year, for work, and for "gap year" reasons.

Prior research has shown that the demographic factors, measures of social and cultural capital, academic preparation and achievement, and school-level factors presented in Perna's (2006) model not only predict college enrollment (Engberg & Wolniak, 2009), but also the choice to delay as well (Rowan-Kenyon, 2007). This study indicates that Perna's (2006) model of college choice is also relevant to understanding and explaining students' choices to delay for different reasons and lengths of time and confirms that student characteristics are related to, and predict, the ways in which students delay.

Perna's (2006) model (see *Figure 1*) depicts students' demographic characteristics, cultural capital, social capital, academic preparation and achievement and family income directly impacting the cost-benefit analysis and eventually the college choice. When controlling for the pre-college characteristics included in this study, findings reveal that academic preparation and achievement were more predictive of the choice to delay in general, though less predictive of particular delay choices. Instead, among delayers, a combination of students' gender, race, income, parents' marital status and dependency status were more predictive of delaying for particular reasons. Returning to the descriptive analyses of immediate enrollers and delayers based on their delay reasons (see Table 6), the two groups were different across every measure of academic preparation achievement. Also, with respect to time, one-year delayers were more academically prepared and accomplished than two-or-more year delayers. However, when disaggregating delayers by their reasons, there was little differentiation among

students. Instead, background and demographic characteristics seemed to distinguish the different types of delayers more than their academic background characteristics did.

Discussion

This study lays the foreground for investigating the effects associated with delaying for different reasons, which is addressed in the second paper of this dissertation. The descriptive analyses presented here of delay practices, delaying students, and the predictors of delaying for different reasons provides critical information for identifying the types of students who are more or less at risk of delaying for particular reasons. This study may also help to lay the foundation for designing interventions to both guide delay choices and mitigate some of the effects associated with delaying for different reasons.

An important contribution of this study is the identification of considerable variation among delaying students in terms of their reported reasons for delaying and length of time spend delaying. This study found that students who reported delaying for travel in general, a "gap year," and just one year, are disproportionately white, from higher income families, and have higher parental educational attainment and higher academic preparation and achievement as compared to other types of delayers. These findings suggest that the general population of gap year takers come from more advantaged backgrounds than other types of delayers.

This study attempted to locate the population of "gap year" takers within the analytic sample of students under the age of 24 who began their postsecondary education in 2003-04. Previous studies reported, anecdotally, that gap year participants are predominantly White females from middle-class backgrounds who attended private schools and are disability free (Horn et al., 2005; Jones, 2004; King, 2011; Martin, 2010).

Based on the analyses in this study, compared to immediate enrollers, students identified as "gap year" delayers were from lower income backgrounds, had lower levels of parental education and high school academic preparation and achievement. However, when compared to all other delayers, "gap year" delayers were from higher income backgrounds, had higher levels of parental education and high school academic preparation and achievement. The relative position of "gap year" participants within the group of delayers suggests that some elements of a true gap year delay are conceivably captured in the "gap year" construct presented in this paper; however, there are likely critical missing elements. The problem of identifying true gap year participants within the national sample may be a result of a limitation in the data. The definition of a gap year specifies that the decision to delay is intentional (Jones, 2004; King, 2011; O'Shea, 2011b), which is an unobserved factor in this study. Certainly the reasons associated with a "gap year" delay may be the first step in identifying participants, and an indication of their pre-delay intentions with respect to postsecondary enrollment is needed.

Areas for Future Research

The findings of this study add to a limited body of knowledge on the characteristics of students who delay from postsecondary education and the predictors of delay for different reasons and lengths of time. This result suggests several recommendations for future research.

First, a more comprehensive test of Perna's (2006) model is suggested in order to identify the more nuanced contributions of contextual factors on students' decisions to delay for different reasons. Because of the nature in which these data were collected, several aspects of Perna's (2006) model were unable to be tested. For example, high

school characteristics and postsecondary institution-specific factors, such as financial aid packages available, may play a role in delay decisions. In addition, they may be other important factors not captured in Perna's (2006) model. The third paper in this dissertation is designed to specifically explore the reasons that students choose to participate in a gap year and identify other potential elements outside of Perna's (2006) conceptual model that may contribute to the decision to delay.

Second, this study suggests examining the temporal relationship between the decision to delay and other decisions regarding enrollment. The extent to which a delay experience is an intentional choice versus and a cause or influence of future enrollment decisions is unknown. Despite being a longitudinal research design, no data were collected on the students in this study prior to enrollment in postsecondary education. Although students' length of delay is reported, there is no information about the intentionality of the delay or students' postsecondary education plans prior to the delay.

Theory and literature related to gap year practices emphasize that a gap year is an intentional delay and a strategic decision within one's larger educational trajectory (Jones, 2004; King, 2011; O'Shea, 2011b). Presently, it is unknown how delay might operate in order to mediate postsecondary education plans (e.g. if a student indicated no plans to attend postsecondary education upon high school graduation, but then after some time changed his or her mind and decided to enroll based on some experience during that delay time). A study examining both how intentional delayers differ from unintentional delayers, as well as the processes and implications of unintended delays, should be undertaken to better understand the impact and contribution of delay intention. An investigation of this nature would further the understanding of delayers as a

heterogeneous group, who on an individual level, likely experience different effects related to their delay choices.

Related, an accurate identification of gap year delayers within the national sample should be pursued. The proper identification of gap year participants within the national sample of delayers is critical in understanding the true effects of gap year participation beyond the individual successes reported by popular media and even peer-reviewed case study research. As teachers, parents and counselors make decisions about how to guide and support students in their college, and delay, a comprehensive understanding of the effects of delaying for all reasons, and particularly for a gap year, is critical.

Finally, and most importantly, this study suggests an exploration of variation in the effects of delaying based on delay reasons, which will be addressed in the second paper of this dissertation. Prior research has shown that students who delay from postsecondary education are less likely to enter a four-year, degree granting institution (Niu & Tienda, 2013) and have lower chances of bachelor's degree attainment (Bozick & DeLuca, 2005). However, all previous studies have treated delay as a uniform activity and all delayers as a homogenous group. This study showed that different types of students delay in different ways and for different reasons. And presently, there is no understanding of how students' enrollment choices, such as attendance intensity and institutional level and control, or academic outcomes, such as GPA or degree persistence, might be related to the decision to delay for different reasons. It is unknown whether the effects of delaying on postsecondary outcomes vary by delay reason, or more specifically, if all delay is equal in its effects on postsecondary factors and outcomes.

PAPER #2 – NOT ALL TYPES OF DELAY ARE EQUAL: VARIABILITY IN THE EFFECTS OF DELAYING POSTSECONDARY

Introduction

The implications of delaying postsecondary education in the United States is a topic that has generated interest in the field of higher education in recent decades. Postsecondary enrollment behavior as well as success (Adelman, 2006; Bozick & DeLuca, 2005). While there is some variation annually, my analyses of the Beginning Postsecondary Students Longitudinal Study (BPS:04/09) from the National Center for Education Statistics (NCES) of the Department of Education show that within the last decade, approximately 30% of entering postsecondary students, and 20% of students under the age of 24, delayed their entrance for some period of time.

Over the past 25 years, there have been several efforts to identify and describe the characteristics of students who delay their postsecondary education (Carroll, 1989; Horn et al., 2005). Additionally, a handful of studies have examined postsecondary enrollment patterns and academic outcomes associated with delaying (Adelman, 2006; Bozick & DeLuca, 2005). Studies that utilize nationally representative data have consistently found that students who delay are from lower income backgrounds and have lower levels of academic preparation and achievement when compared to their peers who enrolled immediately (Carroll, 1989; Goldrick-Rab, 2010; Horn et al., 2005). Delaying has been associated with a lower likelihood of entering a four-year, degree granting institution and with decreased chances of bachelor's degree attainment (Adelman, 2006; Bozick & DeLuca, 2005). However, in all of these studies, delay has been examined as a uniform

phenomenon and all delayers treated as a homogenous group. No attention has been paid to the myriad of reasons for which students delay or how those reasons may be related to different outcomes.

Another vein of higher education research has focused on a specific group of students delaying for a "gap year," and the positive effects associated with this particular type of delay (Martin, 2010; O'Shea, 2011; Spenader, 2011). Defined here, a gap year is a one-year delay of postsecondary education for the purpose of personal growth and learning, often including travel, work and/or service. The subject of a gap year has generated substantial interest among popular media sources, academic scholars, and prestigious institutions in the U.S. in recent years. Although no empirical study has examined the population of gap year takers, they have been described as a fairly homogenous group, with middle-class, white females over represented (Birch & Miller, 2007; Goldrick-Rab & Han, 2011; King, 2011a; Martin, 2010). Several peer-reviewed studies focusing on students in the U.K. and Australia have shown that students who have taken a gap year experience a host of personal benefits (Coetzee & Bester, 2009; Heath, 2007; King, 2011; O'Shea, 2011b), higher levels of motivation after their gap year (Martin, 2010) and higher academic performance in college (Birch & Miller, 2007).

Despite these studies, there remains a disconnect in the literature that would explain how the reported positive effects of delaying college specifically for a gap year co-occur with negative effects of delaying postsecondary education. Even more broadly, there is no understanding of how delaying for different reasons might have different effects. To address this knowledge gap, this study uses propensity score matching to examine the outcomes associated with different types of delay.

Statement of Purpose

This study has several distinct purposes and areas of contribution. This study examines the assumption that all delay is the same and that the group of delaying students is homogenous and distinctly different from their peers who enroll immediately (non-delayers). The previous paper in this dissertation concluded that not only are delayers distinctly different from immediate enrollers, but that there is significant variation in the characteristics of students that delay for different reasons and lengths of time. This paper builds on the findings from the first paper to address three central deficits in the current understanding of the effects of delay. First, this study examines the effects of several types of delay on students' enrollment choices and educational expectations. Second, this study examines the effects of different types of delay on students' academic performance, educational satisfaction, and civic engagement. An additional goal of this study is to explore the effects associated with delaying for reasons identified as "gap year" reasons. The first paper in this series concluded that the "gap year" delayers identified within this nationally representative sample were significantly different from their non-"gap year" delaying peers, making an investigation of the effects associated with their particular delay experiences of interest. This study contributes to existing literature on the effects of postsecondary delay by identifying the variant effects associated with different delay practices. Findings have the potential to inform and guide students, parents, and college advisors in their decisions about college enrollment timing and delay activities.

Guiding Frameworks

This study tests a conceptual model of postsecondary success that examines how students' demographics and academic preparation and achievement, as well as their pre-

college experiences, impact college choices and outcomes. The concept of "student success" is of interest to and has been conceptualized by several scholars (Adelman, 2006; Conley, 2010; Kuh et al., 2006; Perna & Thomas, 2008). Critical to all models and understandings of college success are students' dispositions, and factors and experiences that occur before, or outside of the college experience. Building on the theoretical and conceptual works of both Kuh (2006) and Perna and Thomas (2008), this study utilizes models of student success to understand the contribution of delay.

Theoretical Framework

Typically, indicators of student success have included measures of college readiness, enrollment, achievement, and attainment (Perna & Thomas, 2008). Utilizing the National Center for Public Policy and Higher Education's work in defining and measuring success outcomes, Perna and Thomas (2008) define ten indicators that fall into four temporal categories: college readiness, college enrollment, college achievement, and post-college attainment (see *Figure 2*). Within college readiness, educational aspirations and academic preparation are used as indicators; college access and college choice as indicators for college enrollment; achievement measured in terms of academic performance, transfer, and persistence, and post-college attainment measured in terms of post-BA enrollment, income, and education attained.

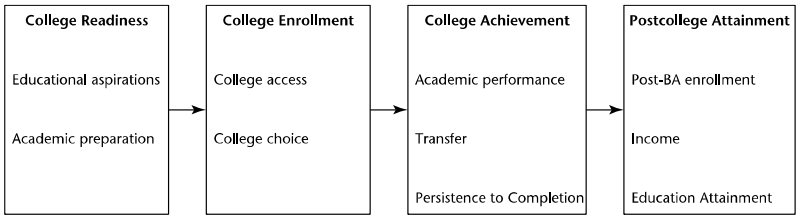

Figure 2. Perna and Thomas's (2008) "Transitions and Indicators of Student Success"

Kuh (2006) proposed that students' pre-college experiences, all forms of capital, namely enrollment choices, academic preparation, aptitude and college readiness, family and peer support, motivation to learn, and demographics, influence their engagement as students and ultimately determine their post-college outcomes. Perna and Thomas (2008) argue that four nested contextual layers influence student success: the social, economic, and policy context, the school context, the family context, and the internal context. Critical to both models of student success are individuals' dispositions and ways of being. Kuh (2006) argues that students' aspirations and motivations are one of the best predictors of their success in college, and that students with diverse experiences are more engaged while in college. Perna and Thomas (2008) also posit that college success is influenced directly by students' attitudes, motivation and behaviors.

In general, frameworks examining student success draw on some combination of social, economic, and education theory, which dictate that individuals' social, cultural and human capital are significant determinants of their success (Perna & Thomas, 2008). While the lines between the forms of capital are not completely clear, social capital generally refers to individuals' relationships, connections and social network, while cultural capital is individuals' cultural background, ways of being and dispositions, as well as possessions that connote status and experiences (Bourdieu, 1973). Human capital is defined as a persons' knowledge and skill set (Becker, 1993). In particular, cultural and social reproduction theory posits that individuals' future status is largely determined by their family background and social class, whereby existing structures are maintained (Bourdieu, 1973; Perna & Thomas, 2008). In this model, having social and cultural capital that is valued by the dominant culture foster success and are reinforced, making it

difficult for those with less-valued forms capital to advance. Human capital theory asserts that a workers' knowledge and skills directly contribute to his or her productivity, and ultimately success (Becker, 1993). Accordingly, individuals with capital valued by the dominant society are positioned to be more successful in educational or employment ventures.

Conceptual Framework

Building on the models of both Kuh (2006) and Perna and Thomas (2008), this study explores the contribution of delay to students' pre-college experiences, accepting and assuming that students' pre-college experiences directly impact their success while in college. As defined, pre-college experiences and characteristics include demographic characteristics and family background, academic preparation and achievement, and attitudes, behaviors, and motivations. This study posits that delay experiences affect participants' attitudes, behaviors, and motivations and provide students with the opportunity to gain various forms of human, cultural and social capital, which ultimately impacts their ability to be successful. The statistical models used in this study accounts for students' reasons for and length of time spent delaying, as well as their demographic characteristics, academic preparation and achievement, enrollment and expectations, and postsecondary outcomes.

When estimating causal effects using propensity score matching (described in the following section) the matching variables should be measured pre-treatment and should be time invariant (Caliendo & Kopeinig, 2005). In selecting the matching variables, it was reasonable to assume that demographic characteristics as well as high school academic factors are true pre-treatment variables; however, it was unclear whether

postsecondary enrollment choices took place before, after, or along with the choice to delay (or receive the treatment). For example, many students who take a gap year apply and are accepted to colleges in their senior year of high school and then decide to delay after they have already selected an institution. On the other hand, it is also highly probably that students may use a delay to make a decision about whether, where and how to attend college. Given the data, I could not determine whether enrollment decisions occurred pre- or post-treatment. To address this limitation, I developed two models: one in which I assumed they happened post-delay and one in which I assumed they happened pre-delay. In the first model, first-year institutional and enrollment characteristics were examined as outcomes. In the second model, the institutional and enrollment characteristics were included in the list of covariates on which the match was made.

Literature Review

At the national level, a considerable amount is known about the types of students who delay postsecondary education and how they differ from students who enter immediately, both in terms of their background characteristics as well as their enrollment practices and rates of degree completion. Although not as comprehensive, there is also a basic understanding of the types of students who participate in a gap year and outcomes associated with their participation. However, generally these areas of research have drawn seemingly contradictory conclusions about the types of students who delay and the effects of delaying. Furthermore, it remains unclear as to how gap year delayers fit within the larger picture of postsecondary delay. This section describes the major findings related to postsecondary delay and gap year experiences to date, and identifies areas in need of deeper exploration.

Postsecondary Delay at the National Level

At the present time, studies related to postsecondary delay have focused on a few key issues. Primarily, all studies have attempted to inventory the population of students delaying as compared to those who enroll immediately within their respective data sets (Adelman, 2006; Bozick & DeLuca, 2005; Carroll, 1989; Goldrick-Rab & Han, 2011; Hearn, 1992; Horn et al., 2005; Niu & Tienda, 2013; Rowan-Kenyon, 2007). Second, questions about the role of delay length have been raised in order to identify how student characteristics and eventual associated outcomes vary by delay length (Horn et al., 2005; Rowan-Kenyon, 2007). Additionally, scholars have examined the relationships between delay and both enrollment patterns (Niu & Tienda, 2013) and college completion (Adelman, 2006; Bozick & DeLuca, 2005). The following subsections describe findings across these issues.

Delaying students. Using the High School and Beyond (HS&B) data set of students who graduated from high school in 1980, Carroll (1989) and Hearn (1992) were among the first scholars to research postsecondary delay practices in the U.S. Their studies drew similar conclusions and set the foundation for future studies exploring related issues using more current datasets. Ultimately, studies have found that students who delayed their postsecondary education were more likely to be male, Black, from lower income backgrounds and to have lower levels of academic credentials and educational aspirations (Carroll, 1989; Hearn, 1992). These observed trends have remained constant through the past two and a half decades (Bozick & DeLuca, 2005). Additional research findings demonstrate that delay is also associated with having family responsibilities, lower levels of parental education, lower levels of academic preparation,

achievement, and aspirations (Goldrick-Rab, 2010; Horn et al., 2005), as well as lower levels of social and cultural capital as measured by several family- and school-based indicators (Rowan-Kenyon, 2007).

Length of delay. The few studies that have examined the role of the length in the delay process have drawn different conclusions. Horn et al. (2005) found that, "as the time between high school graduation and postsecondary enrollment went up, the likelihood of being in the lowest income level declined while the likelihood of being White increased" (Horn et al., 2005, p. 158). They concluded that the longer students delayed, the more likely they were to pursue vocational education and enroll in postsecondary education with the intent of changing careers or improving job skills. In contrast to Horn et al.'s (2005) association of longer delayers with less rigorous enrollment, Niu and Tienda (2011) found that length of delay was not directly related to enrollment patterns.

Enrollment patterns. Students who delay enrollment are reported to have a greater propensity to enter the postsecondary system through a two-year institution and are less likely to be enrolled in a baccalaureate granting institution four years after high school graduation (Bozick & DeLuca, 2005; Carroll, 1989; Niu & Tienda, 2013). Additionally, entering a two-year institution, as compared to a four-year institution, as well as enrolling part-time are known risk factors to degree persistence and graduation (Kuh et al., 2006). These findings indicate that not only are delaying students at an academic disadvantage in high school, in terms of less rigorous preparation, but they also remain at an academic disadvantage in postsecondary education by attending less rigorous institutions.

Degree completion. Several studies have addressed the issue of degree completion, an outcome thought to be associated with postsecondary delay (Adelman, 2006; Bozick & DeLuca, 2005; Carroll, 1989). In general, these studies have shown that delayed entrance is associated with lower odds of bachelor's degree completion, although with some variation in the effect size. Specifically comparing "off-track" students to "on-track" students (who enrolled full-time at a four-year institution directly after high school), Carroll (1989) found the chances of attaining a bachelor's degree were five times lower. Bozick and DeLuca (2005) found that while controlling for several other factors, delaying was associated with a 64% decrease in the odds of degree completion (Bozick & DeLuca, 2005, p. 548). Recently, Adelman (2006) reported that direct enrollment, or no delay, increases the chances of bachelor's degree completion by 21.2% (p. 45).

Conclusions and assumptions. The research presented above exploring students who delay (Carroll, 1989; Horn et al., 2005), the role of delay length (Horn et al., 2005; Niu & Tienda, 2013), enrollment patterns of delayers (Bozick & DeLuca, 2005), and degree completion (Adelman, 2006; Bozick & DeLuca, 2005), points to several key trends with respect to the relationship between delayers and immediate enrollers. First, postsecondary delay is associated with being male, of minority status, of low socioeconomic status, and having family responsibilities. Delaying students also have lower levels of parental education, and lower levels of both academic credentials and educational aspirations. Second, students are delaying for a variety of lengths of time, but a delay or one year appears to be most common. Third, delaying is associated with attending less rigorous institutions at lower attendance intensities. And fourth, college completion rates are lower among students who delay.

One major shortcoming of the studies reviewed here has been their inability to disaggregate and describe delayers based on the reasons for their delay, which assumes the group of delayers is homogeneous. In attempt to develop a more comprehensive understanding of delayers, delay practices, and related outcomes in the U.S., an exploration how student characteristics, including enrollment patterns, vary with respect to the different reasons that students delay, is needed. Though not directly explored in their study, Niu and Tienda (2011) acknowledge that delaying for different reasons may not be uniformly negative, stating, "Delayed enrollment need not undermine pursuit of baccalaureate degrees if the hiatus from academic work allows students to mature, to acquire work experience, and to accumulate resources for college" (p. 2). This acknowledgement of the dynamic landscape of postsecondary delay draws attention to the need for further exploration of delaying for different reasons.

An additional deficit in the literature is a comparison of delayers with non-enrollers in terms of longer-term outcomes. While researchers have compared the pre-college characteristics of students who delay to both those who enroll immediately and never enroll, there have been no comparisons of the effects of delaying on outcomes relevant to those who never enrolled. By only comparing students who delay to those who enroll immediately, based on academic outcomes (such as institutional choices and rates of degree completion) (Adelman, 2006; Bozick & DeLuca, 2005), these studies assume that immediate enrollment, as opposed to no enrollment, is the alterative for delaying students. However, it is certainly possible that for the students who delay, the act of delaying itself permits and/or motivates them to enter postsecondary education;

thus delaying could be looked at as a positive alternative to not enrolling, even if students do not complete a degree.

Gap Year Experiences

Although there have been few empirical studies undertaken to examine U.S. gap year participants and their experiences, studies in the U.K. and Australia report that gap year participants are predominantly white, disability-free, females from middle-class backgrounds who have attended private schools (Horn et al., 2005; Jones, 2004; King, 2011; Martin, 2010). In terms of the personal characteristics of gap year takers, studies in Australia have shown that students who take a gap year tend to be less motivated than their peers (as measured by lower scores on the "Motivation and Engagement Scale (MES-HS) for high schoolers). Additionally, they have been reported to have more post-school uncertainty and lower high school achievement than those who enroll immediately (Birch & Miller, 2007; Haigler & Nelson, 2005; Martin, 2010; O'Shea, 2011a; Stehlik, 2010).

Prior studies have identified a variety of reasons students elect to take a gap year, including: personal, educational, career-related, and financial (Haigler & Nelson, 2005; O'Shea, 2011a; Stehlik, 2010). Several studies reported academic burnout and the need for an academic break as driving factors for gap year participation (Haigler, 2012; Lyons et al., 2012; O'Shea, 2011a). Self-exploration, personal growth, and development with respect to maturity and independence were also commonly reported reasons for taking a gap year.

Although there have been few empirical studies undertaken to examine gap year experiences for U.S. students, it is generally believed that taking a gap year is a positive

and beneficial endeavor. U.K. Foreign Secretary, Jack Straw, has publically promoted gap year practices, arguing that, "Taking a gap year is a great opportunity for young people to broaden their horizons, making them more mature and responsible citizens. Our society can only benefit from travel which promotes character, confidence, decision-making skills" (in Simpson, 2005, p. 453). In terms of research, anecdotal evidence as well as some peer-reviewed studies have identified positive effects associated with participation relating to personal growth ("Bridge Year Program," n.d.; Martin, 2010), language development (Clagett, 2012; Lyons et al., 2012; Simpson, 2005; Spenader, 2011), global citizenship (Heath, 2007; King, 2011), and college and career attainment for students in the U.K. and Australia (Birch & Miller, 2007; King, 2011; Martin, 2010; O'Shea, 2011b; Stehlik, 2010). Across the nation many colleges and universities, including Harvard and Princeton, have begun to embrace the idea of a gap year, supporting the notion that gap year experiences are beneficial to both students and their future postsecondary institutions.

Summary

Synthesis of literature exploring student characteristics and the effects associated with delaying in general as well as separately for a gap year, have resulted in some clear discrepancies with respect to the types of students who delay and the impacts of delaying on college academic outcomes. In general, studies that examined delay overall, without concern for reason for delay, view delay as a threat to degree completion, while those who studied gap year delays concluded that delay offers many personal and academic benefits to participants. Also, gap year participants have been described quite differently from the national profile of delaying students. These findings confirm a need for a more

nuanced understanding of delay motivated by different reasons and how the effects of delaying varying with respect to these reasons. This study attempts to address the current gaps in our understanding of the effects of postsecondary delay.

Research Methodology and Design

This study examines the effects of postsecondary delay on a series of enrollment and expectation indicators as well as academic performance, satisfaction, and civic engagement outcomes. Using a propensity score match, I estimate the causal effect of delaying for different reasons. This study answers the following set of research questions:

1. Do students' reasons for delaying affect their first-year enrollment choices and educational expectations differently?
2. Do students' reasons for delaying affect measures of their overall academic performance, their educational satisfaction, and their civic engagement differently?
    a. Do the effects of delaying vary based on when delay decisions were made with respect to enrollment choices?

The Data

This study utilizes data from the 2004/2009 Beginning Postsecondary Secondary Longitudinal Study (BPS:04/09) from the National Center for Education Statistics (NCES), which was designed to "address the need for nationally representative data on key postsecondary education issues" (Wine et al., 2011, p. 1). The study examines the experiences over the course of a six year period of first-time beginners (FTBs), defined as "students who started their postsecondary education for the first time during the 2003–04 academic year at any postsecondary institution in the United States or Puerto Rico"

(Wine et al., 2011 p. iii). The BPS:04/09 survey includes students who were FTBs in the National Postsecondary Student Aid Study in 2003-04 (NPSAS:04).

The primary purpose of the NPSAS:04 study was to understand how students and their families pay for postsecondary education. The survey targeted all undergraduate, graduate, and professional students, enrolled in Title VI postsecondary institutions in the U.S. and Puerto Rico between July 1, 2003 and June 30, 2004. Title IV institutions are those eligible for the federal student aid program and include public and private (both not-for-profit and for-profit) four-year, two-year, and less-than-two year colleges and universities. The implementation of the survey entailed an eight-step sequential process. Beginning with construction of a sampling frame from the 2000-2001 Integrated Postsecondary Education Data System (IPEDS) Institutional Characteristics (IC), 58 institutional strata were created based upon "institutional level, institutional control, highest level of offering, Carnegie classification, and state" (Cominole et al., 2006, pp. 5-6). Within institutions, students from eight strata ranging from both in- and out-of-state FTBs to doctoral students were sampled. NPSAS:04 stratified and oversampled FTBs separately from other undergraduate students in anticipation of the 2006 and 2009 BPS follow-up surveys. Originally, 56,070 FTBs were targeted and 49,410 contacts were established, yielding an 88.1 percent response rate. Five sources of data contributed to the NPSAS:04: (1) Student Record abstraction which involved institutionally provided financial aid and registrar records for students, entered electronically at the institution, (2) Student Interviews, either self-administered or interviewer administered, via a web-based questionnaire, (3) Central Processing System (CPS)'s data from the Free Application for Federal Student Aid (FAFSA) form, (4) the National Student Loan Data System

(NSLDS)'s data on Title IV loans and Pell Grants, and (5) IPEDS information about postsecondary institutions. The student interview was comprised of six sections including enrollment, student expenses and financial aid, employment, education experiences, student background, and locational information.

In both 2006 and 2009, eligible students were contacted using a variety of methods including batch tracing, mailings, Computer Assisted Telephone Interviewing (CATI) tracing, intensive tracing, and field tracing. The content of the interviews focused on four key topics: enrollment history, enrollment characteristic, employment, and background. The interviews were administered in the same fashion as NPSAS:04 student survey. Surveys took approximately 20 minutes to complete and students were financially incentivized at each stage of the data collection process. Among the panel respondents there was an unweighted response rate of 87.0% and a weighted response rate of 85.7%. Additionally, postsecondary transcripts were requested and obtained with an 87% response rate from all institutions attended by participants between July 1, 2003 and June 30, 2009. Transcripts were keyed and coded using a specialized system. In total, there are 1,647 variables in the data set. The data used in this study are from the BPS:04/09 restricted use database.

Previous studies focusing on postsecondary delay have utilized NELS:88 , BPS:96/01, and 2002 Texas graduating seniors (Bozick & DeLuca, 2005; Goldrick-Rab & Han, 2011; Horn et al., 2005; Niu & Tienda, 2013; Rowan-Kenyon, 2007). Presently, no peer-reviewed studies have utilized more current data sets, including BPS:04/09, to examine delayers.

Analytic sample. The 2003-04 National Postsecondary Student Aid Study (NPSAS:04) included 44,670 *potential* FTBs (composed of confirmed FTBs and other "likely" FTBs). Of this group, 21,580 were confirmed non-FTBs or non-respondents. The first follow-up study in 2006 included a sample of 23,090 students deemed eligible from the 2004 sample and the final sample in 2009 included 18,640 students. The complete BPS:04/09 data set contains completed information in the form of both interview and administrative records (postsecondary transcripts) for a total of approximately 16,680 students from an eligible sample of 18,640 students. In total, there were approximately 16,120 panel respondents who participated in all three waves of data collection. The BPS:04/09 data set contained an unweighted total of 16,680 first-time beginner respondents, representing 3,746,295 students.

Because this dissertation is concerned with the postsecondary enrollment decisions and related experiences of students who have graduated from high school in the United States, I excluded students who had not earned a high school diploma or certificate (N=1,360) and those who attended a foreign high school (N=370). This reduced my unweighted sample size to 14,960 respondents and my weighted population size to 3,304,827. Then I restricted the analytic sample to FTBs under the age of 24 years old for two salient reasons. First, this study is primarily concerned with the implications of delaying postsecondary education as compared to directly enrolling; so examining shorter-term delay was more appropriate. Thus, it was necessary to exclude individuals over the age of 24 years old, which simultaneously capped the maximum length of delay to seven years. Second, for many of the variables of interest in this study, specifically those related to academic background, data was only collected for those under age 24.

Restricting the analytic sample in this way retained 87% of the unweighted subjects in the study for a total of 13,060 respondents representing a weighted population of 2,739,244. Finally, because delay information is a critical outcome and predictor variable in this study, I performed listwise deletion in the 66 cases with missing data on the reason for delay. The cases deleted only made up 0.51% of the overall remaining sample. All 66 cases with missing data on the reason for delay reported delaying for two or more years. This reduced the unweighted analytic sample size to 12,990, allowing me to ultimately generalize to a population of 2,721,215 students representing approximately 73% of the BPS:04/09 population. Table 8 illustrates this restriction of the analytic sample.

Table 8

Unweighted and Weighted Sample Counts for Selection Criteria and Resultant Analytic Samples

	Unweighted N	**Weighted Population Size**
Total number of students in BPS:04/09	16,680	3,746,295
Number of students who graduated from high school in the U.S.	14,960	3,304,827
Number of students who graduated from high school in the U.S. and are under age 24	13,060	2,739,244
Number of students under age 24 who graduated from high school in the U.S. and if delayed, indicated their reason for delaying	12,990	2,721,215

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: Figures weighted using WTB000 & WTB001-WTB200.

Variables

In order to explore the ways in which student characteristics varied based on delay reasons, I disaggregated the delayers in several different ways according to their indicated reasons. To date, no peer-reviewed studies have disaggregated students by their reasons for delaying. First, students in the analytic sample were compared based on

whether or not they delayed. Second, students were compared based on timing of postsecondary entrance, including: no delay (entered immediately following high school), delayed for one year, or delayed for two or more years. The data set also included six "delay reason" variables where students could indicate delaying for any combination of the following reasons – work, military, marriage or family responsibilities, health problems, travel, or other reasons. As the six delay reason choices were not mutually exclusive, there were a total of 64 different delayer profiles, 45 of which were represented within the sample. In this study, I specifically examined students who indicated delaying for work and for travel and compared those students to immediate enrollers as well as non-work and non-travel delayers. Finally, Jones (2004) in his *Review of the Gap Year Provision* specifies that a gap year may be comprised of any of the following activities, taking place either domestically or internationally and in a structured or unstructured way: organized travel, independent travel, learning, paid work, voluntary work, or leisure activities. In an effort to separately capture students who had delayed expressly for the purpose taking gap year (rather than for such reasons as health, having a family, or joining the military), I selected six of the delayer profiles that most closely aligned with "gap year" reasons. I then examined students within these groups that delayed for one year: travel only, travel + other, travel + work, travel + work + other, work only, and work + other. Additionally the average time delayed for students by characteristics is also utilized. Throughout this study, I intentionally use quotations around the word "gap year" to denote that this grouping is presently a hypothesized identification of actual gap year participants.

Appendix A includes the full list of variables used in this analysis. Aligning with many of the categories within Perna's (2006) model and several of the same independent variables used in previous studies, this study examines students' pre-college characteristics such as gender, race, income, parents place of birth, and parents' marital status and highest level of education. Students' high school academic achievement and preparation are described using indicators of high school type, highest level of math taken, grade point average (GPA) and admissions test score. Though not a measure of preparation, high school type was used as a proxy for student-to-teacher ratio, which is intended to be an indicator of the availability of institutional agents and social capital (Perna, 2006). According to the Institute of Education Sciences, the average student-to-teacher ratio is 10.7 to 1 in private schools (Education, 2010) and 16 to 1 in public schools (Education, 2012). Additionally, students are described in terms of their enrollment choices and degree expectations during their first year at school. Finally, the outcome variables of interest in this study include measures of academic performance, satisfaction with educational experiences, and civic engagement. Specifically, this study investigates the effects of delaying on first-year GPA, cumulative GPA, bachelor's degree completion, any degree completion, dropping out, satisfaction with undergraduate experience, satisfaction with major, participating in community service in both 2004 and 2009, and ever having voted.

Missing Data

There were very small proportions of missing data. In particular, there were only missing or unknown data on four of the predictor variables: parents' marital status, parents' highest level of education, highest level of high school math taken, and

admissions test score (SAT or ACT). However, these data were not missing at random (NMAR). As in several of the cases, subjects indicated that the questions and/or the provided answer options were inappropriate. All missing data information is provided in Appendix B. In particular, parents' marital status was not asked for with students declared as "independents." Thus the variable specifying parents' marital status had 8.5% missing values because the question was not asked to that portion of the sample. In the case of parents' highest level of education, 1% of the analytic sample indicated that they did not know their parents' highest level of education, which may have been a result of a variety of different circumstances – both known and unknown. For example a small percentage of the students reporting they did not know their parents' highest level of education were orphans (as illustrated in "orphan" variable).

Regarding academic preparation and achievement variables, 13.4% of the sample chose the option "none of these" when asked to indicate their highest level of high school mathematics based on four other options (Algebra 2, Trigonometry/Algebra II, Precalculus, and Calculus), Although it is impossible to know for certain if the students' highest level of math was below the Algebra 2 level, above the Calculus level, or in another branch of mathematics such as statistics, descriptive statistics showed that students who indicated "none of these" had lower levels of other academic preparation and achievement. Specifically, while 16.7% of the entire weighted sample had missing data on their postsecondary admissions test score (SAT or ACT), 42.4% of those who indicated "none of these" as their highest level of high school math had missing data on their admissions test. Within the overall weighted sample of those who took an admissions test, 24.1% scored in the lowest quartile (a derived score between 400 and

870 points on the SAT), as compared to 34.0% of students who indicated "none of these" as their highest level of high school math. With respect to the three high school GPA categories (below 3.0, 3.0–3.4, and 3.5–4.0), the weighted sample was fairly evenly distributed with about one third of students in each category. However, of the students that specified taking "none of these" math courses in high school, 56.2% had a GPA below 3.0 and only 12.4% had a GPA between 3.5–4.0. Additionally, only 5.1% of the "none of these" math course group attended private school as compared to 9.9% of the entire sample, and only 10.1% of them had Advanced Placement credits accepted by their postsecondary institution as compared with 20.0% of the entire sample.

Fourteen percent of the analytic sample had missing data on admission test score (ACT or SAT). A cross tabulation of admissions tests scores with the variable "SAT or ACT exams taken" indicated that those with missing data "did not take the SAT or ACT" exam, rather than did not report the score. To determine if students not having taken an admissions test was random, or normally distributed across other variables, I ran several cross-tabulations. Results showed that students who did not take the SAT or ACT had lower levels of academic preparation and achievement than students who had taken the test. Specifically, while 31.6% of the entire sample had a GPA below 3.0, 58.3% of those who did not take admissions test did. Similarly, while 33.1% of the sample had a GPA between 3.5 – 4.0, only 7% of those with no admissions test score did. Additionally, only 3.8% of students who did not take an admissions test attended private school as compared with 9.9% of the entire sample.

There were missing data on two of the outcome variables: cumulative GPA in 2009 and ever having voted as of 2009. Nine-percent of the sample had missing data on

cumulative GPA, and cross tabulations showed a higher proportion of missing data for those with a certificate (25.2%) or no degree (10.2%) by 2009, as compared to those with an associate's degree (6.5%) or a bachelor's degree (5.5%). Finally, 2.4% of subjects declined to answer whether or not they had ever voted in 2009. A cross tabulation with respondents' citizenship status in 2009 revealed that those with missing data were either classified as resident alien of foreign of international students, and were likely not asked the question.

Because the data missing were not missing at random (MAR) or missing completely at random (MCAR), but instead intentionally skipped, I created additional categories with each variable to describe the reason the question was skipped or not applicable. For example, since missing data on the admissions test score was a result of not having take an admissions test, I created a fifth category for "did not take test" when examining students by their admissions test quartile. In my analysis of the predictors of delaying for different reasons presented in the first paper, not having taken an admissions test as compared to scoring in the lowest quartile was a significant predictor of delaying both in general and specifically for one year for either work and/or travel. This affirmed my decision to create a separate category for those who did not take the test. This method is also referred to as dummy-variable adjustment (Allison, 2009), where a dummy variable is included to indicate whether or not the data is missing on that specific predictor, and all dummy variables are included as predictors in the model. This method is used when data are missing because the question cannot be answer or is inappropriate, as indicated in the cases above. I chose not to utilize other common methods of dealing

with missing data such as listwise and pairwise deletion or imputation because it was inappropriate.

Analytic Methods: Propensity Score Matching

To make inferences about the effect of delaying enrollment choices and expectations, academic performance, educational satisfaction and civic engagement requires speculation about the effects of both delaying and not delaying, or delaying for one reason and not another, for any given individual (Rosenbaum & Rubin, 1983). Since the effects of both delaying and not delaying (or enrolling immediately) cannot be observed for the same individual (Rosenbaum & Rubin, 1983), other means for determining causal inferences must be employed. Randomized-control trials are regarded as the most robust means for estimating causal inferences, as both the treatment and control groups are assumed to be similar in all ways that affect the outcome (Holland, 1986; Rosenbaum & Rubin, 1983). In this study, where high school graduates self-select to delay from postsecondary education, as with other non-experimental studies where the treatment and control groups are self-selected, the likelihood that individuals in the treatment and control groups are fundamentally different in both observable and unobservable ways is high.

This study uses propensity score matching to estimate average causal effects for the cohort of students beginning postsecondary education in 2004 (BPS:04/09). Propensity score matching can be used to create a control group that is similar to treated group along observable variables, particularly those that are linked to self-selection into the treatment or control group (and related to the outcome of interest). Creating a comparable control group allows for meaningful comparisons to be made (Rosenbaum &

Rubin, 1983). In the first comparison made in this study, the treatment (or comparison group) is defined as delaying postsecondary education, and the control (or reference group) as not delaying. Following this main comparison, there are a series of other comparisons made between and among different types of delayers and immediate enrollers. Table 9 shows the distribution of students along different delay characteristics. As different types of delay are not mutually exclusive, comparisons are made between students in each of the four delay categories and immediate enrollers, as well as between students who indicated delaying and not delaying for each of the four reasons.

Table 9

Distribution of Sample Along Delay Characteristics

	Unweighted			Weighted		
	N	% of Sample	% of Delayers	N	% of Sample	% of Delayers
Analytic Sample	12,990			2,721,215		
Immediate Enrollers	11,300	87.0%		2,258,532	83.0%	
Delayers	1,690	13.0%	100.0%	462,683	17.0%	100.0%
1-Year Delayers	820	6.3%	48.6%	223,476	8.2%	48.3%
Work Delayers	1440	11.1%	85.3%	398,370	14.6%	86.1%
Travel Delayers	510	3.9%	30.2%	136,491	5.0%	29.5%
"Gap Year" Delayers	480	3.7%	28.4%	137,417	5.0%	29.7%

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: (a) Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation.

Following the guidance of both Caliendo and Kopeinig (2008) and Domingue and Briggs (2009), after generating a propensity score, I match students on their estimated propensity score. I then check for "balance" to insure that the treatment and control groups have the same distribution on plausible confounders, assume "strong ignorability" and proceed as if student were randomly assigned. Finally, I compute a treatment effect as a weighted average and compute a sensitivity analysis (Caliendo & Kopeinig, 2005).

Step 1: Estimating propensity score of students delaying postsecondary education. According to Rosenbaum and Rubin (1985), based on a host of covariates, a propensity score indicates the probability of exposure or being in the treatment group. When a control group is properly matched, the propensity scores for each group should be balanced (Rosenbaum & Rubin, 1985). The basic propensity score model takes the following form:

$$\pi\ (\mathbf{x}) = \Pr(z = 1|\mathbf{x}) \quad (1)$$

Here, the propensity score, $\pi\ (\mathbf{x})$, is the conditional probability of exposure and ranges between 0 and 1 (z = 1 is exposed; z = 0 is unexposed) given the covariates, **x.** Although there are no clear guidelines with respect to specifying a model form to estimate a propensity score, Caliendo and Kopeinig (2005) offer that while any discrete choice model can be used, both probit or logit models are preferable to linear probability models when estimating a binary treatment case, particularly one where the response variable may be highly skewed. I chose to estimate the propensity scores using the log odds of exposure:

$$y_i = \log[\frac{1-\pi(x)}{\pi(x)})] = logit\ (\pi(x)) = \alpha + \beta_x + \varepsilon_i \quad (2)$$

=

Thus for an individual, the propensity score can be estimated in the following way:

$$\pi(x) = \frac{e^{\alpha+\beta x+\varepsilon_i}}{1+e^{\alpha+\beta x+\varepsilon_i}} \quad (3)$$

In the first comparison of the study, the binary treatment case of delaying versus not delaying, the binary outcome model using the logit is a clear choice. However, in the following comparisons of those who delayed for different reasons and different amounts, the challenge of multiple treatment cases is presented. Lechner (1999) and Caliendo, and

Kopeinig (2005) discuss the option of using a multinomial logit model to estimate the propensity score, which allows for all three options to be considered. However, a series of binomial models is often used as well, as they are more robust to miss-specification in one of the series that may compromise all comparisons (Caliendo & Kopeinig, 2005). Lechner (1999) found little different in the performance of multinomial models over a series of binomial models and suggests the latter. For my multiple (three) treatment cases, I use three binomial models.

With regard to variable choice, Caliendo and Kopeinig (2005) advise that, "only variables that are unaffected by participation (or the anticipation of it) should be included in the model" (p. 6). Ideally, this means that the covariates are fixed over time or measured prior to the treatment selection, and in no way influenced by participation (or anticipation of participation) in the treatment. Additionally, it is commonly accepted to use prior research to form hypotheses about variables related to the treatment selection. Because Perna's (2006) model for college choice specifies important factors in the process and postsecondary delay has been explored by other studies, I utilize variables already shown to be related to college choice and postsecondary delay to guide the specification of this propensity score matching model. Deciding how many covariates to include in the model is also not clearly defined (Domingue & Briggs, 2009); however, over-parameterized models are discouraged as they can increase variance and disrupt the maintenance of common support.

A major challenge in this study related to the selection of appropriate matching variables was making assumptions about *when* the choice to delay occurred with respect to enrollment choices, and consequently which covariates to include in the matching

algorithm. It was reasonable to assume that demographic characteristics as well as high school academic preparation and achievement characteristics were not influenced by the treatment of delaying, and thus were true pre-treatment variables. Equation 4 shows the propensity score estimation based upon students' demographic characteristics and indicators of academic preparation and achievement.

$$\begin{aligned} y_i = {} & \beta_0 + \beta_1(Gender) + \beta_2\,(Race) + \beta_3\,(Income) + \beta_4\,(Parents\ Born\ in\ US) \\ & + \beta_5(Parents'Marital\ Status) + \beta_6(Parents'Education) \\ & + \beta_7(High\ School\ Type) \\ & + \beta_8(Highest\ High\ School\ Math\ Course) \\ & + \beta_9(High\ School\ GPA) + \beta_{10}\,(Admissions\ Tests\ Score) + \varepsilon_i \end{aligned} \tag{4}$$

However, based on the data, it was not evident whether students made enrollment choices before, after, or along with the choice to delay (or receive the treatment). For example, many students who take a gap year apply and are accepted to colleges in their senior year of high school and make a decision to delay after they have already decided in which institution they will enroll and their attendance intensity (Bull, 2006). However, it is also highly probable that students may use a delay to make a decision about whether where and how to enroll in postsecondary studies. For this reason, it was unclear as to whether or not to include the enrollment and expectation variables in the matching algorithm as well. Equation 5 shows the propensity score estimation based upon students' demographic characteristics, indicators of academic preparation and achievement, as well as enrollment characteristics and degree expectations.

$$y_i = \beta_0 + \beta_1(Gender) + \beta_2\,(Race) + \beta_3\,(Income) + \beta_4\,(Parents\ Born\ in\ US) + \beta_5(Parents'Marital\ Status) + \beta_6(Parents'Education) + \beta_7(High\ School\ Type) + \beta_8(Highest\ High\ School\ Math\ Course) + \beta_9(High\ School\ GPA) + \beta_{10}\,(Admissions\ Tests\ Score) + \beta_{11}\,(Attendance\ Intensity) + \beta_{11}\,(Institution\ Level/Control) + \beta_{12}\,(Degree\ Expectations) + \varepsilon_i \quad (5)$$

To estimate the effects of delaying for different reasons, I ultimately matched in both ways and compared the results. As will be described in the findings section, I did not find drastically different results.

Step 2: Matching students based on their estimated propensity scores. Once the propensity score estimation model is specified, there are many approaches to actually matching subjects (Caliendo & Kopeinig, 2005). Caliendo and Kopeining (2005) identify five different algorithms, each with multiple variations, that all have some degree of trade-offs between bias and efficiency; thus, there is not one superior method. Theoretically, with larger sample sizes, the variant matching methods should ultimately produce the same results. However, with smaller sample sizes, the performance of the estimator will depend on the structure of the data. For example, the overall proportion of treatment cases in the sample is an important factor. Each algorithm identifies the appropriate match or matches in different ways, so ultimately the structure of the data and available controls should guide the decision of the algorithm selection.

The most commonly used matching method, nearest neighbor matching, is known to have several shortcomings – most notably bad matches if the nearest neighbor is far away. This is also the default method when using the Stata™ command "psmatch2." Using nearest neighbor matching also presents a question of whether or not to allow

replacement, or whether to permit control cases to be matched with multiple treatment cases if it is the best available match. Allowing replacement undoubtedly increases the quality of the matches, but also increases the variance of the estimator. When not allowing replacement, the random sorting of the data is critical.

Another approach, caliper matching, sets a maximum distance in propensity score that a control can be from the targeted treatment. The specific level of the caliper is difficult to know prior to the trial and error process, which Caliendo and Kopeining (2005) present as a potential downside. Radius matching, used in conjunction with caliper matching, allows for the usage of all members within the caliper, not restricted to simply the nearest neighbor(s). Caliendo and Kopeining (2005) highlight the benefits to radius matching, explaining it "uses only as many comparison units as are available within the caliper and therefore allows for usage of extra (fewer) units when good matchers are (not) available" (p. 10). They argue this approach allows for oversampling without forcing bad matches, but conditioning matches on common support is important.

To select the matching method most appropriate for these data, I followed Arpino's (2013) suggestion of exploring several methods through an iterative process to ultimately reduce the percentage of Standardized Bias (%SB). The %SB is a measure of the average imbalances in the covariates between the treatment and the control groups, and is related to checking for overlap, common support, and balance described in Step 3 below. Per this suggestion, using "psmatch2," I explored seven different matching methods for the treatment of delay (in general) and the control of not delaying, matching on students' demographic characteristics (gender, race, income, parents born in the U.S., parents' marital status, parents' education) and measures of academic preparation and

achievement (high school type, highest level of high school math, high school GPA, admissions test score). The results of these trials are shown in Table 10.

Table 10

Exploring Matching Methods to Improve Balance.

	Replacement	%SB
NN (1)	No	4.52
NN (1)	Yes	2.47
NN (3)	Yes	2.09
NN (5)	Yes	2.25
NN with caliper (0.01)	Yes	2.47
NN (5) with caliper (0.01)	Yes	2.20
Radius caliper (0.01)	Yes	1.56

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: NN = Nearest Neighbor, %SB = Percent Standardized Bias.

Ultimately, I selected the caliper and radius (.01) method as it yielded the lowest percent standardized bias using my variables. Caliendo and Kopeining (2005) also identify examining the standardized bias as an appropriate indicator for assessing the quality of the match. Specifically, they argue that biases below 3% or 5% are seen as sufficient. Because my study involved making several comparisons between different combinations of delayers, I also performed this exercise with other treatment conditions (i.e. matches based on different control and treatment groups) and consistently found radius caliper (.01) matching to be the most favorable method, and in every case the %SB was below 5%. As a robustness check, I also estimated the effects of delaying using other matching methods to see how sensitive the estimates were to the different methods. A comparison of the estimates of the effect of delaying on graduating with a bachelor's degree using the caliper radius (.01) method and the nearest neighbor (3) method is shown in Appendix D. While the magnitudes of the odds ratios changed only slightly, the directions and levels of significance remained the same.

Next, in order to estimate the effects of postsecondary delay on the specified outcomes, two different matching models were estimated (using two different sets of covariates) to account for the fact that the relationship between delay choice and institutional and enrollment choices was indeterminable based on the data given. First, students were matched only on their pre-college characteristics, which included demographic and academic preparation and achievement information. Estimating the models in this way assumed that students made the decision to delay prior to deciding which type of institution to attend and how to enroll, and that the delay experience impacted the institutional and enrollment decisions. However, because it was not known if in fact students decided to delay prior to deciding where and how to enroll, I also estimated models that assumed that students made their delay decision after enrollment decisions (as is typically done with a gap year (Bull, 2006)). The second model matched students on their pre-college characteristics, as well as on their first-year enrollment characteristics.

Table 11 displays the statistics, including the percentage of standardized bias, for each of the matched pairs examined in this study based on the two sets of covariates. Including different covariates in the models changed the %SB, though not substantially, and the %SB never exceeded 3.22. Additionally, this table displays the number and proportion of cases "on support," which will be described in the next section.

Table 11

Caliper Radius (.01) Matching Statistics for All Match Pairs

			Pre-college Experiences Only			Pre-college Experiences + Enrollment Choices		
Reference	**Comparison**	N	%SB	OS	%OS	%SB	OS	%OS
No Delay	Delayed	12,990	1.56	12,991	99.98	1.90	12,983	99.98
No Delay	1-Year Delay	12,120	0.89	12,111	99.89	1.09	12,116	99.89
2+ Year Delay	1-Year Delay	1,690	1.33	1,687	99.65	1.69	1,684	99.65
No Delay	2+Year Delay	12,170	1.68	12,169	99.98	2.16	12,161	99.98
No Delay	Work Delay	12,750	1.53	12,743	99.98	1.88	12,736	99.98
Other Delay	Work Delay	1,690	2.45	1,683	99.41	2.89	1,677	99.41
No Delay	Other Delay	11,550	3.22	11,543	99.94	2.54	11,545	99.94
No Delay	Travel Delay	11,810	1.15	11,810	99.97	0.98	11,797	99.97
Other Delay	Travel Delay	1,690	2.05	1,673	98.82	1.21	1,690	98.82
No Delay	Other Delay	12,480	1.62	12,478	99.97	1.66	12,479	99.97
No Delay	"Gap Year"	11,782	0.99	11,782	100.0	1.01	11,777	100.0
Non-"Gap Yr"	"Gap Year"	1,690	1.24	1,673	98.82	1.20	1,669	98.82
No Delay	Non-"Gap Yr"	12,510	1.42	12,511	99.98	2.22	12,509	99.98

Source: U.S. Department of Education National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: N is unweighted; SB = "Standardized Bias;" OS = "On Support"

Step 3: Checking for overlap, common support, and balance. After matching, it is essential to ensure that there is overlap (common support) in propensity scores between the treatment and control groups so that the treatment effects can be accurately estimated. When estimating the effect on a continuous outcome variable, the "psmatch2" package in Stata provides an option for ensuring common support, "by dropping treatment observations whose pscore is higher than the maximum or less than the minimum pscore of the controls" (see help psmatch2). Appendix C shows the means across of the different covariates for the delayers and immediate enrollers when first matched only on the pre-college variables, and then on the pre-college and enrollment characteristics. The table shows the balance between the two groups, and in all cases, there were no differences in the means of any of the variables.

Additionally, when using the match to estimate effects on categorical outcomes, the analytic sample can be restricted to those found to be on common support. Also, common support can be assessed through visual tests and analyses (density plots) of the propensity score distributions. *Figure 3* and *Figure 4* show kernel density plots of the propensity scores generated for delayers and immediate enrollers using the caliper radius (.01) method. *Figure 3* shows the distribution of the propensity scores for the treated (delaying) and untreated (immediate enrollers) groups. *Figure 4* shows the distribution of the propensity scores, where the weight generated by the matching method is applied.

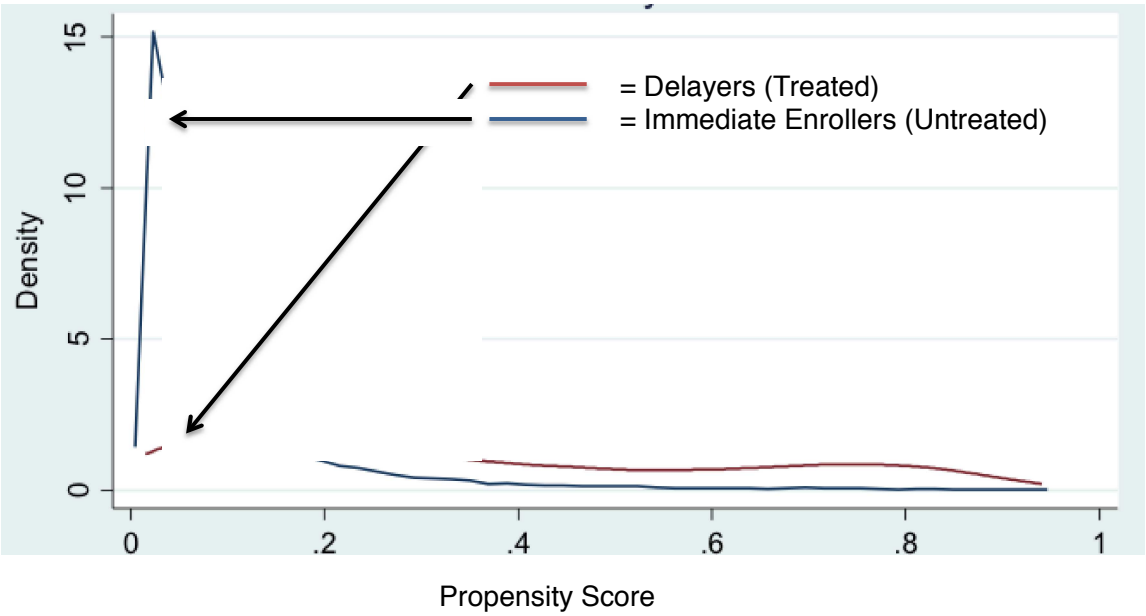

Figure 3. Kernal Density Plot of Propensity Scores of Delayers (Treated) and Immediate Enrollers (Non-treated) for the Entire Sample

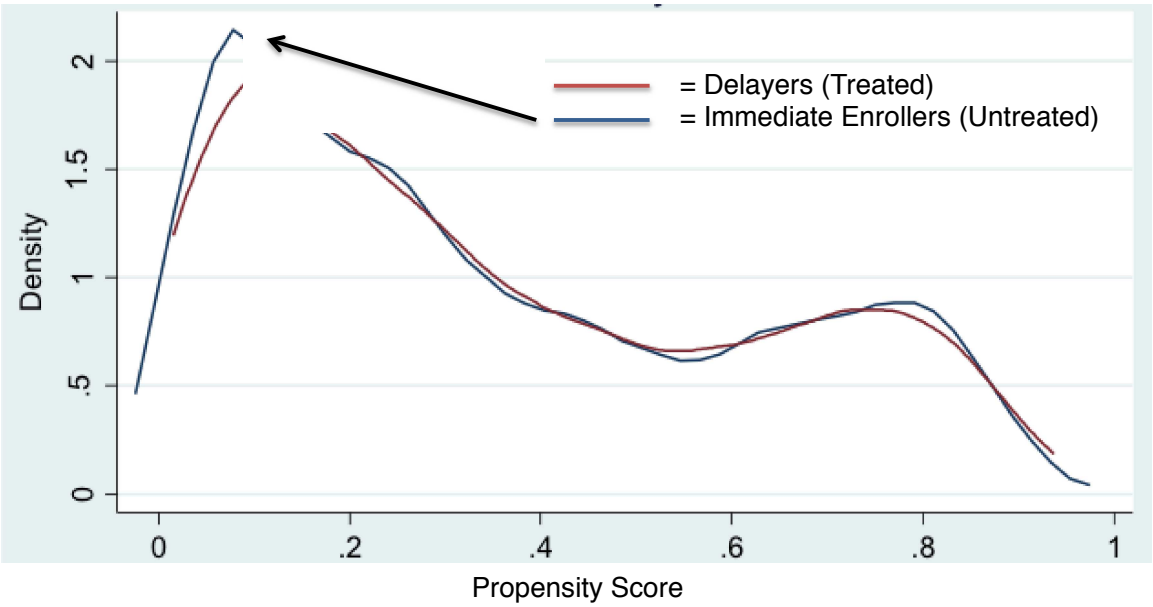

Figure 4. Kernal Density Plot of Propensity Scores of Delayers (Treated) and Immediate Enrollers (Untreated) for the Matched Sample (Weighted)

This step also highlights one of the overall drawbacks of propensity score matching: cases at either end of the propensity score distribution with no overlap are excluded, as treatment effects cannot be estimated when a match cannot be made.

Table 11 shows the number and percentage of overall cases on support (OS) for each match. In general, across every match, over 99% of cases remained on support, meaning that appropriate matches could be made between the treatment and control groups.

Ensuring proper balance in the distribution of covariates between the treatment and control groups is also essential. Standardized betas, t-tests, stratification tests, joint significant tests and pseudo-R^2 are common tools for assessing balance (Caliendo & Kopeinig, 2005). Unbalanced data suggest that the matching procedure was unsuccessful and must be recalibrated. As described above, I selected the matching method that yielded the smallest proportional bias overall.

After confirming common support and balance with the matched data, the next step is to assume strong ignorability (Rosenbaum & Rubin, 1983), which means proceeding as if there are no unobserved covariates that are confounded with the treatment assignment. In the case of this study, I assumed that all covariates related to delaying from postsecondary education were measured and controlled for within the models. In true experiments where participants are randomly assigned to treatment and control groups, the two groups are assumed to be equal along every observable and unobservable characteristic as well as along their propensity scores. Having equal propensity scores is critical to making causal inferences (Rubin, 2004). Therefore, in the case of a non-experimental design using PSM, assuming a strongly ignorable treatment assignment allows for valid causal inferences to be drawn. It is also important, as described in step 5, to conduct a sensitivity analysis to assess how sensitive the results are to a violation of this assumption – or "How strongly related to treatment receipt and the outcome would an unobserved variable have to be in order to make the observed effect

go away" (Stuart, 2012 slide 139). As the assumption of strong ignorabililty is critical to making causal inferences, the sensitivity analysis is equally important in understanding the caveats of propensity score matching.

Step 4: Computing treatment effect. To estimate the effect of the treatment of delaying postsecondary education on the specified outcomes, I employed simple linear and logistic regression models. I restricted the analytic sample to those "on support," using the weight given to the matched observation as a sampling weight, which denotes the, "inverse of the probability that the observation is included because of the sampling design" (see help pweight). The "psmatch2" package generates a "_weight" variable with the radius caliper matching method, which is the overall weight given to the matched observation. For the continuous outcome variables (such as GPA), I used the following linear regression model:

$$GPA_i = \beta_0 + \beta_1 (Delayed)_i + \varepsilon_i \mid support = 1 \quad (6)$$

Estimates of the binary outcomes, such as bachelor's degree attainment and community service participation were computed in the following way:

$$logit\ (Bachelor's\ Degree_i) = \beta_0 + \beta_1 (Delayed)_i + \varepsilon \mid support = 1 \quad (7)$$

Where β_0 is the intercept, $\beta_1$is the slope and ε is the random error.

Step 5: Sensitivity Analysis. The final step in propensity score analysis involves testing for the sensitivity of the estimated treatment effect with respect to hidden bias, or the unobserved covariates, or "to determine how strongly an unmeasured variable must influence the selection process in order to undermine the implications of matching analysis" (Caliendo & Kopeinig, 2005). Caliendo and Kopeinig (2008) suggest calculating Rosenbaum-bounds to test for hidden balance and Lechner-bound to test for

common support. Given two individuals with the same observed covariates, Rosenbaum-bonds produce an odds ratio comparing the odds of receiving the treatment for each of the two individuals. If the study is absent of hidden bias, then the effect of unobserved variables will be zero and the vector of observed covariates (**x**) will solely determine the probability of treatment assignment. An odds ratio of one would indicate no hidden bias or unobserved covariates, and an odds ratio other than one would indicate the degree to which unobserved covariates are present. The Mantel and Haenszel's (MH) test-statistic can be used to estimate the degree of uncertainty about the strongly ignorable treatment assignment assumption (Caliendo & Kopeinig, 2005).

The Lechner-bounds method utilizes the information from individuals whose propensity scores fell outside of the area of common support, and were thus excluded from the analysis. He argues that ignoring these individuals, or estimating the average treatment effect on the treated (ATT) for only those individuals within the area of common support, can be misleading. The bounds incorporate the proportion of individuals within the area of common support as compared to the total number of individuals and the difference in means between those outside the area of common support and the overall mean: "The lower (upper) Lechner-bound is given by the weighted average of a) the estimated average treatment effect and b) the average distance of observations for treated persons throughout common support from the upper (lower) bounded potential outcome. Weights are given by probabilities a) to be or b) not to be within common support" (Stephan & Pahnke, 2008). This allows for a better understanding of the impacts of drawing inference from only a subgroup (Caliendo &

Kopeinig, 2005). Throughout the analyses, a threshold of $p < .10$ was used to determine statistical significance.

Limitations

There are several limitations to these data and the collection methods used in this study. First, I restricted the sample to those FTBs under the age of 24, which does not allow for examination of postsecondary delay practices on older learners and returners. Despite increasing interest in adults returning to college, this study was designed to focus on delay patterns of students of traditional college-enrollment ages. The results of this study would likely be greatly varied if older learners were introduced. As this study is a secondary analysis, it is limited to the use of variables available in the BPS:04/09 dataset. While NPSAS:04 asked students questions related to their length of and reason for delay, the survey was not designed specifically to investigate questions related to delay choice, or motivations for delay. Additionally, because information collected on delay behavior was collected at the same time as the institutional and enrollment characteristic data, it is unclear as to the sequence in which those choices occurred. Specifically, it is impossible to discern if delay were planned or intentional, or whether for a delayer, the decision to enroll was preceded by an initial decision to not enroll. Because the intentionality of the delay decision is a critical component of a gap year delay, identifying true gap year participants in this data set is not possible. Also, this data set does not contain information on students who never enrolled in postsecondary education, making comparisons of between delayers and non-enrollers impossible. In addition, because of the cross-sectional nature of the data, causality could not be determined. Specifically, it

was unclear whether delay caused or was a consequence of the various attitudes and outcomes.

Further, propensity score matching as a method for estimating causal effects is not without its limitations. Primarily, as the strong ignobility assumption is critical to the model, "Unobserved confounders [are] the Achilles heel of non-experimental studies" (Stuart, 2012, p. 139). The proposed models account for an important set of pre-college variables, but in all likelihood, there *are* other unobserved variables that may be biasing the results. Specifically, the first and third papers in this dissertation confirm that Perna's (2006) conceptual model for student college choice can be used to understand the decision to delay. However, the third paper suggests the expanding this model to consider the ways in which students' emotional state, well-being, and attitudes and perceptions with respect to and towards all contextual layers impact the decision to take a gap year or delay. Particularly relevant to gap year, the data presented in the third paper showed while pre-college experiences such as demographic factors and high school academic preparation and achievement were important, students' attitudes towards these experiences, such as feeling burnt out from high school experiences, framed the entire decision process. These feeling- and attitude-based factors are not easily measured in general and certainly not available in the BPS:04/09 dataset.

Another limitation is that propensity score matching treats all covariates, whether strongly or weakly associated with the outcome, the same. For this reason, Stuart (2012) recommends closely investigating the strength of the relationships with these covariates, as well as paying particular attention to the balance of the matches. An analysis of the associations between the pre-college characteristics and delaying is shown in Appendix

E, which indicates substantial variation in these relationships. Beta coefficients of pre-college characteristics independently predicting delay range from -2.080 to +2.322. However, because this study predicted several types of delay that were related in different ways to the covariates, I did not change the model because of these results. Also, as mentioned previously, propensity score matching excludes cases outside of the area of common support and thus determines causal effects for only a subpopulation. Description of the matching statistics presented in

Table 11 shows that in this study, over 99% of all observations across the matches were on support.

Findings

This findings section describes the observed effects of delay on first-year enrollment choices and postsecondary outcomes; particular attention is paid to differences between students who delayed for different reasons. Because the relationship between delay choice and institutional and enrollment choices was indeterminable based on the data given, two models were estimated using the caliper radius (.01) method: one matching students only on their pre-college characteristics, and one matching students on their pre-college and as well as their enrollment characteristics. In the first research questions where enrollment choices are the outcome of interests, students are only matched on their pre-college characteristics.

Research Question 1: The Effects of Delay on First-year Enrollment Choices and Educational Expectations

The first research question examined the effects of delaying postsecondary education on first-year enrollment characteristics and measures of educational expectations. Table 12 shows the odds ratios resulting from several logistic regression models after students were matched on their pre-college characteristics only. In general, delayers were nearly three times more likely than immediate enrollers to attend exclusively part-time as compared to exclusively full-time during the first year (OR=2.97), and approximately twice as likely to enroll in public two-year (OR=1.87) and

other[4] (OR=2.32) institution types, as compared to a public four-year institution. Delayers were also less likely than immediate enrollers to expect to attain more than a bachelor's degree as compared to only a bachelor's degree (OR=.87).

These same patterns were also present when disaggregating delayers by their reasons for delaying. In all cases, students who delayed for any reasons were more likely than delayers to enroll part-time (as compared to full-time) and at public two-year and other institutions (as compared to public four-year institutions). "Gap year" delayers were more likely than immediate enrollers to enroll in a mix of full- and part-time as compared to exclusively full-time (OR=1.33). Among delayers, one-year delayers as compared to two-year delayers were less likely to enroll exclusively part-time (as compared to exclusively full-time) (OR=.70). Also, those who had delayed for work were more likely than were non-work delayers to enroll in a public two-year institution as compared to a four-year public institution (OR=1.66). The odds ratios for part-time enrollment and public two-year institutions were lowest for non-work delayers when compared to any other subgroup – indicating that this group experienced the negative effects of delay to a lesser extent than did other delayers. Specifically, work delayers had higher odds than did non-work delayers of enrolling in a public two-year institution as compared to a public four-year institution.

There were no differences in degree expectations between immediate enrollers and two-year, non-work, travel and non-"gap year" delayers. Only one-year delayers, work delayers, non-travel delayers, and "gap year" delayers were less likely to expect to

[4] "Other" institution types = private for-profit 4-year, private not-for-profit 2-year, private for-profit 2-year, private for-profit 2-year, public less-than-2-year, private non-for profit less-than-2-year, and private for profit less-than-2-year.

attain more than a bachelor's degree (as compared to only a bachelor's degree) than immediate enrollers. Among delayers, "gap year" delayers as compared to their non-"gap year" delaying counterparts were less likely to expect less than a bachelor's degree.

These findings confirm that delayers, regardless of their reason for delaying, are more likely to enroll part-time as compared to full-time, and in two-year public institutions as compared to in four-year institutions. Both part-time and two-year institution enrollment are known risk factors to degree completion (Kuh et al., 2006). They were also less likely to expect to complete more than a bachelor's degree (as compared to just a bachelor's degree). In terms of variation within the delayer groups, one-year delayers had higher odds of full-time enrollment than did two-or-more year delayers; and non-working delayers had lower odds of enrolling in a public two-year institution as compared to enrolling in a four-year public institution. Finally, travel delayers had higher odds of expecting to complete more than a bachelor's degree (as compared to only a bachelor's degree) than did non-travel delayers.

Research Question 2: The Effects of Delay on Academic Performance, Educational Satisfaction, and Civic Engagement

The second research question examined the effects of delaying on a series of academic, educational satisfaction and civic engagement outcomes measured during the postsecondary experience using two different models. In the first model, students were matched only on their pre-college characteristics, and the effects of delaying on first-year GPA (described below) were estimated using four separate models based on the institution type (level and control), which is the equivalent to adding fixed effects. This was done because GPA varied significantly across the four institution types: public four-

year, private non-profit four-year, public two-year and "other." I surmised that institution-type interacted with the pre-treatment characteristics to result in different outcomes. Eighty-nine percent of the sample fell into the first three categories. In my second model where students were matched on pre-college and enrollment characteristics, first-year GPA was estimated across the entire sample.

Academic performance. Table 13 shows the coefficients and odds ratios for the effects of delay on academic performance indicators when students were matched only on their pre-college characteristics. Table 14 is very similar, but shows the estimates when students were matched on both their pre-college and enrollment characteristics. Several indicators of postsecondary academic performance were used: first-year GPA, cumulative GPA, and degree persistence (measured by bachelor's degree completion, any degree completion, and dropping out by 2009).

First-year GPA. Overall, the mean first-year GPA was 2.87 (SE=.01) for the sample; 2.84 (SE=.02) at public four-year institutions; 3.01 (SE=.03) at private non-profit four-year institutions; 2.76 (SE=.02) at public two-year institution; and 2.97 (SE=.04) at other institutions.

At public two-year institutions, there were many differences in the GPAs of delayers and immediate enrollers. Overall for students at public two-year institutions, delaying post-secondary education was associated with an average of 0.18 higher GPAs. Within four-year public and four-year private non-profit institutions, there were no differences in GPA observed between delayers and immediate enrollers in general. When disaggregating delayers by timing, delaying for one year (as compared to delaying for two or more years) was associated with 0.13 lower GPAs at public two-year institutions.

This negative effect of a one-year delay compared with longer delays was also seen when comparing students on "gap year" delay (also a type of one-year delay). At public four-year institutions, delaying for two or more years (as compared to not delaying) was associated with a 0.17 higher GPA. Delaying for non-"gap year" reasons (as compared to not delaying) was associated with a 0.13 higher GPA. Finally, there were no differences in the GPAs between delayers at private non-for-profit institutions.

When matching students based on their pre-college and enrollment characteristics (see Table 14), first-year GPA was estimated at the cohort level. Overall, delaying was associated with a 0.16-point higher first-year GPA as compared to not delaying. Delaying for two-or-more years as compared to not delaying was associated with a 0.28-point higher GPA (and also 0.15-points higher than one-year delayers). Delaying for work and travel as compared to not delaying were both associated with 0.17-point higher GPA. Delaying for a "gap year" (which was classified as a type of one-year delay) was associated with 0.11-point lower GPAs than delaying but not for a "gap year" (and there were no differences between immediate enrollers and "gap year"-delayer GPAs).

Cumulative GPA. Using cumulative GPA as a measure of academic performance, several significant differences were present when comparing students based on their delay choices, and overall, delaying was associated with higher academic performance. The two matching models yielded nearly identical results. When matched on their pre-college characteristics only (see Table 13), students who delayed postsecondary education had, on average, a 0.13-point higher cumulative GPA as compared to students who did not delay. Those who delayed for 2 or more years had a significantly higher cumulative GPA than did immediate enrollers (+0.22 points). As compared to not

delaying, delaying for travel was associated with a 0.15 higher GPA. Of importance, there were no significant differences among immediate enrollers and the following subgroups of delayers: 1-year, "gap year," and non-work delayers. Among delayers, one-year delayers had lower GPAs (-0.13 points) than two-or-more year delayers, and travel delayers had higher GPAs (+0.10 points) than did non-travel delayers.

Then, when matching students based on their pre-college and enrollment characteristics (see Table 14), nearly identical patterns existed, but with slightly larger coefficients. Specifically, delaying was associated with having a 0.14-point higher GPA. Travel delay (as compared to enrolling immediately) was still associated with an average of 0.20-point higher GPAs; and delaying for two or more years (as compared to one year) was associated with a 0.27-point higher GPA.

Degree persistence. Regardless of the matching method, delaying in general or for any specific reason was associated with lower odds of bachelor's degree or any degree completion, and higher odds of dropping out by 2009. While the magnitude of the odds ratios estimated when matching only on demographic and academic background characteristics were larger and more frequently significant when compared to the odds ratios when matching also on enrollment characteristics, the direction of the estimates shows the same patterns.

Overall, when matched on pre-college characteristics only (see Table 13), delaying was associated with 58% lower odds of completing a bachelor's degree and 32% lower odds of completing any degree or certificate within six years, and associated with 40% greater odds of dropping out. When comparing different types of delayers to immediate enrollers, the odds of completing a bachelor's degree were anywhere from

52% - 71% lower. Among delayers, only travel and non-travel delayers differed. Delaying for travel was associated with 34% higher odds of attaining a bachelor's degree and 22% lower odds of dropping out within the six-year period.

When students were matched based on demographic and academic background characteristics, as well as on their enrollment characteristics, the results were quite similar, although the magnitudes of the odds ratios were smaller. In general, when matching on all demographic and academic background characteristics, as well as enrollment and institutional characteristics, delaying was associated with 35% lower odds of completing a bachelor's degree and 22% lower odds of completing any degree or certificate within six years. Delaying was also associated with 25% greater odds of dropping out. Overall, in this matching model (where enrollment characteristics were used in addition demographic and academic background characteristics), there were fewer differences between immediate enrollers than when matching only on demographic and academic background characteristics. Only delaying for travel (as compared to delaying but not for travel) was associated with 18% lower odds of dropping out.

Satisfaction. There were no differences in terms of satisfaction with quality of undergraduate education or with major or course of study associated with any type of delay. Both matching methods confirmed this. The odds ratios displaying effects of delaying on educational satisfaction are shown in Table 15 and Table 16.

Civic engagement. Community service participation in both the first year and 2009, as well as having ever voted as of 2009 were used as indicators of civic engagement. The odds ratios displaying effects of delaying on civic engagement indicators are shown in Table 15 and Table 16. Across all three variables, the odds ratios

produced by the two matching models were very similar. Based on both matching models, delayers and immediate enrollers differed most in terms of their participation in community service within 12 months of the first year (2003-04). Delaying for any reason (as compared to enrolling immediately) was always associated with lower odds of first-year community service participation. Specifically, delaying in general was associated with 26% lower odds of participation (OR=.74). Among delayers, one-year delayers were more likely to have participated in community service in the first-year than were two-year delayers (OR=1.29)

There were no differences between the aggregated group of delayers and immediate enrollers in terms of community service participation and voting behavior reported in 2009. As far as 2009 community service, one-year delayers (OR=.85/.84) and "gap year" delayers (OR=.77/.80) were less likely to have participated than were immediate enrollers. Among delayers, travel delayers were more likely to have participated than were non-travel delayers (OR=1.41/1.34), and "gap year" delayers were 24% less likely (OR=.79/.76) than non-"gap year" delayers.

Finally, in terms of having ever voted, the only differences present were associated with the amount of time spent delaying; one-year delayers were less likely to have voted than were two-or-more year delayers (OR=.73/.65) and two-year delayers were more likely to have voted than immediate enrollers (OR=1.31/1.32).

Table 12

Odds Ratios from Propensity Score Matching and Logistic Regression to Predict First-Year Enrollment Choices

		Attendance Intensity (*Ref=Excl. Full-time*)		Institution Type (*Ref=Public 4-Year*)			Highest Degree Expected (*Ref=Bachelor's Degree*)	
Reference	Comparison	Exclusively Part-time	Mixed Full-time & Part-time	Private Non-for-profit 4-year	Public 2-year	Other[a]	Less than a Bachelor's Degree	More than a Bachelor's Degree
		Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
No Delay	Delayed: All Reasons	2.97***	1.07	0.97	1.87***	2.32***	1.13	0.83**
No Delay	Delayed: 1 Year	2.81***	1.12	0.87	1.87***	2.41***	1.25†	0.78**
Delayed: 2+ Years	Delayed: 1 Year	0.7**	0.81	0.81	0.84	0.90	0.88	1.00
No Delay	Delayed: 2+ Years	3.14***	0.97	1.11	1.84***	2.52***	1.22	0.85
No Delay	Delayed: Work	3.22***	1.05	0.99	1.92***	2.41***	1.14	0.81**
Delayed: No Work	Delayed: Work	1.22	0.93	1.21	1.66*	1.3	1.05	0.87
No Delay	Delayed: No Work	2.45***	1.1	0.77	1.43†	2.07***	1.2	0.91
No Delay	Delayed: Travel	3.28***	1.16	1.05	1.99***	2.40***	1.13	0.94
Delayed: No Travel	Delayed: Travel	1.24	0.99	1.29	1.00	1.01	0.81	1.28*
No Delay	Delayed: No Travel	2.8***	1.00	0.89	1.81***	2.38***	1.17	0.78**
No Delay	Delayed: "Gap Year"	3.37***	1.33†	0.89	2.24***	2.28***	1.13	0.7***
Delayed: No "GY"	Delayed: "Gap Year"	0.92	1.15	0.93	1.19	0.90	0.71*	0.82
No Delay	Delayed: No "GY"	2.91***	0.95	1.03	1.73***	2.40***	1.23	0.90

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation. Results of logistic regressions, † p < .10, *p < .05, **p < .01, ***p < .001.

[a]Other = Private for-profit 4-year, private not-for-profit 2-year, private for-profit 2-year, private for-profit 2-year, public less-than-2-year, private non-for profit less-than-2-year, and private for profit less-than-2-year.

Table 13

Coefficients and Odds Ratios from Pre-College Characteristic Propensity Score Matching and Logistic Regression to Predict Academic Outcomes

		Grade Point Averages (GPAs)					Degree Persistence		
		First-year by Institution Type				Cumulative			
Reference	Comparison	Public 4-Year	Private NFP[a] 4-Year	Public 2-Year	Other[b]	All	Attained a Bachelor's Degree	Attained Any Degree	Dropped Out (No Degree)
		Coef.	Coef.	Coef.	Coef.	Coef.	Odds Ratio	Odds Ratio	Odds Ratio
No Delay	Delayed: All Reasons	0.08	-0.01	0.18***	0.20**	0.13 ***	0.42***	0.68 ***	1.40 ***
No Delay	Delayed: 1 Year	0.03	-0.14	0.07	0.11	0.03	0.40***	0.64 ***	1.48 ***
Delayed: 2+ Years	Delayed: 1 Year	0.00	-0.12	-0.13†	-0.18*	-0.13 *	0.97	0.99	0.93
No Delay	Delayed: 2+ Years	0.17†	0.23	0.27***	0.19*	0.22 ***	0.42***	0.75 **	1.26 *
No Delay	Delayed: Work	0.05	0.10	0.16***	0.16*	0.13 ***	0.40***	0.68 ***	1.37 ***
Delayed: No Work	Delayed: Work	0.05	0.28	0.05	0.21†	0.02	0.87	0.96	0.91
No Delay	Delayed: No Work	0.19	-0.08	0.14	0.12	0.09	0.47***	0.77 †	1.29 †
No Delay	Delayed: Travel	0.06	-0.08	0.16**	0.28***	0.15 **	0.47***	0.70 ***	1.23 *
Delayed: No Travel	Delayed: Travel	0.13	0.18	0.00	0.14†	0.10 †	1.34†	1.15	0.78 *
No Delay	Delayed: No Travel	0.08	0.02	0.18***	0.20*	0.13 **	0.38***	0.67 ***	1.46 ***
No Delay	Delayed: "Gap Year"	-0.02	-0.12	0.05	0.14†	0.05	0.38***	0.55 ***	1.75 ***
Delayed: No "GY"	Delayed: "Gap Year"	-0.27	-0.12	-0.14†	-0.10	-0.03	1.04	0.95	1.07
No Delay	Delayed: No "GY"	0.13†	0.08	0.27***	0.27***	0.16 ***	0.44***	0.75 ***	1.30 **

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation. Results of logistic regressions, † p < .10, *p < .05, **p < .01, ***p < .001.

[a]NFP = Not-for-profit. [b]Other = Private for-profit 4-year, private not-for-profit 2-year, private for-profit 2-year, private for-profit 2-year, public less-than-2-year, private non-for profit less-than-2-year, and private for profit less-than-2-year.

Table 14

Coefficients Odds Ratios from Pre-College and Enrollment Characteristic Propensity Score Matching and Logistic Regression to Predict Academic Outcomes

Reference	Comparison	Grade Point Averages (GPAs)		Degree Persistence		
		First-year	Cumulative	Attained a Bachelor's Degree	Attained Any Degree	Dropped Out (No Degree)
		Coefficient	Coefficient	Odds Ratio	Odds Ratio	Odds Ratio
No Delay	Delayed: All Reasons	0.16***	0.14 ***	0.65***	0.78***	1.25**
No Delay	Delayed: 1 Year	0.05	0.03	0.58***	0.73***	1.27**
Delayed: 2+ Years	Delayed: 1 Year	-0.15***	-0.14 *	0.93	0.99	0.93
No Delay	Delayed: 2+ Years	0.28***	0.27 ***	0.71**	0.84†	1.14
No Delay	Delayed: Work	0.17***	0.15 ***	0.63***	0.77***	1.21*
Delayed: No Work	Delayed: Work	0.04	0.06	0.98	1.02	0.85
No Delay	Delayed: No Work	0.13*	0.10	0.61**	0.82	1.22
No Delay	Delayed: Travel	0.17***	0.20 **	0.67***	0.85†	1.09
Delayed: No Travel	Delayed: Travel	0.06	0.10 †	1.23	1.17	0.82†
No Delay	Delayed: No Travel	0.17***	0.12 **	0.59***	0.76***	1.30**
No Delay	Delayed: "Gap Year"	0.04	0.07	0.55***	0.64***	1.49***
Delayed: No "GY"	Delayed: "Gap Year"	-0.11**	-0.03	1.00	0.93	1.07
No Delay	Delayed: No "GY"	0.22***	0.17 ***	0.69***	0.87	1.10

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation. Results of logistic regressions, † p < .10, *p < .05, **p < .01, ***p < .001.

Table 15

Odds Ratios from Pre-College Characteristic Propensity Score Matching and Logistic Regression to Predict Educational Satisfaction and Civic Engagement Outcomes

Reference	Comparison	Educational Satisfaction		Civic Engagement		
		Satisfied with PSE	Satisfied with Major	Community Service 2004	Community Service 2009	Ever Voted 2009
		Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
No Delay	Delayed: All Reasons	0.99	0.88	0.74***	0.96	1.13
No Delay	Delayed: 1 Year	0.91	0.88	0.75***	0.85†	0.95
Delayed: 2+ Years	Delayed: 1 Year	0.81	0.90	1.29*	0.86	0.73†
No Delay	Delayed: 2+ Years	1.09	0.94	0.69***	0.91	1.31†
No Delay	Delayed: Work	1.03	0.88	0.76***	0.95	1.06
Delayed: No Work	Delayed: Work	1.06	0.94	0.92	0.93	1.02
No Delay	Delayed: No Work	0.78	0.96	0.67**	0.91	1.30
No Delay	Delayed: Travel	1.08	0.92	0.81*	1.11	1.20
Delayed: No Travel	Delayed: Travel	1.06	0.88	1.19	1.41**	1.20
No Delay	Delayed: No Travel	0.98	0.93	0.71***	0.88	1.10
No Delay	Delayed: "Gap Year"	1.01	0.96	0.67***	0.77*	1.00
Delayed: No "GY"	Delayed: "Gap Year"	0.99	1.07	1.00	0.79†	0.87
No Delay	Delayed: No "GY"	1.01	0.91	0.76**	0.95	1.11

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation. Results of logistic regressions, † p < .10, *p < .05, **p < .01, ***p < .001.

Table 16

Odds Ratios from Pre-College and Enrollment Characteristic Propensity Score Matching and Logistic Regression to Predict Educational Satisfaction and Civic Engagement Outcomes

Reference	Comparison	Educational Satisfaction		Civic Engagement		
		Satisfied with PSE	Satisfied with Major	Community Service 2004	Community Service 2009	Ever Voted 2009
		Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
No Delay	Delayed: All Reasons	1.01	0.92	0.74 ***	0.96	1.21
No Delay	Delayed: 1 Year	0.97	0.92	0.76 ***	0.84†	0.93
Delayed: 2+ Years	Delayed: 1 Year	0.85	0.84	1.27 †	0.87	0.65**
No Delay	Delayed: 2+ Years	1.02	0.85	0.69 ***	1.02	1.32†
No Delay	Delayed: Work	1.07	0.93	0.75 ***	0.93	1.17
Delayed: No Work	Delayed: Work	1.08	0.97	0.98	0.89	0.95
No Delay	Delayed: No Work	0.80	0.94	0.68 *	0.93	1.32
No Delay	Delayed: Travel	1.04	0.93	0.73 **	1.02	1.19
Delayed: No Travel	Delayed: Travel	1.00	0.87	1.15	1.33*	1.12
No Delay	Delayed: No Travel	1.02	0.97	0.70 ***	0.87	1.16
No Delay	Delayed: "Gap Year"	1.10	0.99	0.67 ***	0.80*	1.03
Delayed: No "GY"	Delayed: "Gap Year"	1.03	1.09	1.02	0.76†	0.87
No Delay	Delayed: No "GY"	0.99	0.89	0.78 **	1.05	1.21

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation. Results of logistic regressions, † p < .10, *p < .05, **p < .01, ***p < .001.

Summary of Findings

After using propensity score matching to create matched samples of delayers and immediate enrollers, this study found that delay in general was associated higher GPAs but largely negative effects on the other measured outcomes including degree persistence. With the exception of higher GPAs, overall there was no type of delay that had a positive effect on any of the outcomes measured in this study. In terms of enrollment patterns, expectations, degree persistence and civic engagement, students who did not delay always performed better than those who delayed, no matter the reason. In terms of enrollment, delaying was associated with higher odds of attending exclusively part-time (as compared to exclusively full-time), higher odds of enrolling in a public two-year institution (as compared to a public four-year institution), and lower odds of expecting to complete more than a bachelor's degree. In terms of academic outcomes, delaying was associated with higher first-year and cumulative GPAs, lower odds of bachelor's degree or any degree completion, and, higher odds of dropping out. In terms of civic engagement, delaying was associated with lower odds of having participated in community service within the first-year.

Despite finding varied, but largely negative affects associated with delaying overall, after using propensity score matching to create matched samples among delayers based on their reasons for delaying, this study showed that the effects of delay vary by reason for delaying. Traveling proved to be a differentiating element among delayers, and overall a positive activity. Travel delayers (as compared to non-travel delayers) had higher odds of expecting to complete more than a bachelor's degree (as compared to just a bachelor's degree), had higher first-year GPAs when enrolled in "other" institution

types, higher cumulative GPAs, higher odds of bachelor's degree completion, lower odds of dropping out, and higher odds of community service participation within the 12 months of 2009.

After creating a matched sample of one-year and two-or-more year delayers, findings were inconsistent as to who performed better. As far as academic outcomes, two-or-more year delayers had higher first-year GPAs in public two-year and other institutions and higher cumulative GPAs. However, these same delayers were more likely to enroll exclusively part-time (as compared to exclusively full-time), were less likely to have participated in community service in their first year, but more likely to have voted by 2009. These findings suggest that students who delayed for longer periods of time were more academically focused when they began their studies, but perhaps less focused on attaining a bachelor's degree as evidenced by a higher likelihood of enrollment in a two-year institution.

After creating a matched sample of "gap year" delayers and non-"gap year" delayers, findings indicted that "gap year" delayers had lower first-year GPAs at public two-year institutions and were less likely to have participated in community service within the 12 months of 2009. Finally, creating a matched sample of work delayers and non-work delayers, findings indicated that a non-work delay was associated with more rigorous enrollment patterns. Non-work delayers were less likely to enroll in a public two-year institution (as compared to a public four-year institution) as compared to work delayers. Comparing the magnitude of the odds ratios for enrolling exclusively part-time (as compared to exclusively full-time) of different types of delayers when compared immediate enrollers, non-work had the lowest odds ratios overall.

This study also showed few substantive differences in the effects of delay when making different assumptions about when the decision to delay took place (or when matching students in the two ways presented). While the magnitude of the odds ratios between the two models varied, an examination of the final academic, satisfaction and civic engagement outcomes showed consistency in the relative strength and direction of the relationships.

Discussion

This study contributes to the field of higher education in several ways. First, it adds to the understanding of the effects associated with postsecondary delay in general by using a recent nationally representative dataset to examine the effects of delay on outcomes beyond what has previously been studied. Second, it furthers the understanding of delay by examining how outcomes vary based on students' reasons for delaying. Third, this study provides insight into how students who delay for a gap year might be located within the national sample of students. Fourth, this study raises important questions and considerations with respect to the timing of delay decisions, and the related implications for enrollment and postsecondary outcomes.

The Academic Effects of Delay

This study confirmed many of the findings from previous studies examining the academic outcomes associated with postsecondary delay. On the whole, research conducted using nationally representative datasets similar to BPS:04/09 have shown that delayers are less likely to expect a bachelor's degree (or higher) (Niu & Tienda, 2013), less likely to enroll in a four-year degree granting institution, and less likely to complete a bachelor's degree (Bozick & DeLuca, 2005; Carroll, 1989). Using the BPS:04/09 data

and matching students based on their pre-college characteristics, as well as on their enrollment characteristics, in large-part confirmed these findings.

However, despite confirming several pervious findings, a salient and surprising contribution of this study is related to the academic performance of delayers as measured by GPA. Using nationally representative data and propensity score matching to identify a matched sample of immediate enrollers, this study showed that, on average delayers had significantly higher first-year and cumulative GPAs than immediately enrollers. This held true when matching students on their pre-college characteristics only and examining students within institution types, as well as when matching based on pre-college and enrollment characteristics and comparing students across institution types. After the first year, both within public two-year institutions and overall, delayers had higher GPAs than did immediate enrollers. Six years later, examining cumulative GPA, delayers also had higher GPAs than did immediate enrollers. In other words, for immediate enrollers that were the same as delayers on all pre-characteristics, delaying appears to be beneficial to GPA outcomes.

In general, academic performance as measured by GPA has not been examined within the context of postsecondary delay. However, a few single-institution studies (only one published) have compared the grades of delayers and immediate enrollers. Clagett's (2012) and Birch and Miller's (2007) both found that for students at Middlebury College and the University of Western Australia respectively, delaying enrollment by one year had a positive impact on academic performance as measured by GPA and marks.

Previously, studies using nationally representative data have used degree completion as a measure for academic achievement, and have found that delaying is

associated with lower odds of bachelor's degree completion (Bozick & DeLuca, 2005; Carroll, 1989). Despite the positive findings related to GPA for delayers, this study found that delaying was also associated with lower odds of degree attainment, higher odds of dropping out, and lower odds of having participated in community service within the 12 months in 2009. While the findings reported in this study align with those of previous studies, discrepancies in academic success of delayers and immediate enrollers as measured by both GPA and degree attainment leave room for additional investigation. This study showed that delaying is also associated with higher GPAs, both in the first year and overall. This discrepancy in measures of academic success may be the result of the fact that delayers are three times as likely to enroll part-time as compared to full-time, and almost twice as likely to enroll in a public two-year institution as compared to a public four-year institution. These patterns also align with the finding that delaying students had comparatively lower academic expectations than immediate enrollers (specifically, delayers had lower odds of expecting to complete more than a bachelor's degree (OR=.83)). Delaying students may also have some other goals besides degree completion (potentially learning for the sake of learning) in mind when entering postsecondary. Higher GPAs suggest that delaying students may be more focused on and engaged in their studies while enrolled in postsecondary education, but degree completion may not be a as strong of a priority.

A further investigation of the relationship between GPA and degree completion with the data revealed that overall, a one-point increase in first-year GPA was associated with being over twice as likely to complete a bachelor's degree (OR=2.16, SE=.08), while a one-point increase in cumulative GPA was associated with being over five times

as likely to complete a bachelor's degree (OR=5.38, SE=.29). However, when disaggregating these associations by delay status, for immediate enrollers the relationship between GPA and degree completion was stronger (higher odds ratios) than for delayers. This affirms that for delayers, academic performance as measured by GPA was less predictive of degree completion.

In terms of the role of delay timing, this study confirmed previous reports that increased delay times are not associated with greater enrollment penalties (Niu & Tienda, 2013). When comparing students who delayed for one year with those who delayed two-or-more years, results were mixed in terms of who fared better.

Delay Reasons

Another major contribution of this study is the disaggregation of delayers by reason for delay. While this study disaggregated delayers by their indication of delaying for one year, and delaying work, travel, or "gap year" reasons, the greatest number of significant differences between delayers occurred between those who delayed for travel and those who did not, when matching on pre-college and enrollment characteristics. Examining the Clagett (2012) and Birch and Miller (2007) studies of the effects of delay on GPAs more closely, a one-year delay likely included travel, as Middlebury's website indicates that a gap year serves as an opportunity to "travel, work, or pursue other interests," and in Australia in general, a gap year includes an element of travel, often accompanied by work. Also, both of these institutions predominantly serve full-time students. As of 2014, Middlebury College enrolled 99% students full-time ("Middlebury College," n.d.) and graduated 88% of students within four years (*colleges.usnews.rankingsandreviews.com*, n.d.), while UWA enrolled between 60%-

70% of students full time from 2010-2012 (The University of Western Australia,, n.d.). According to the U.S. News and World Report's 2014 National Liberal Arts College Rankings, Middlebury College is ranked 4th in the nation ("Top Liberal Arts Colleges," n.d.), and according the Australian Education Network, UWA is ranked 7th in Australia ("Rankings of Australian Universities 2014-2015," n.d.). Given the rankings of these institutions, it seems likely that these students were already relatively high achievers prior to their delay. However, since each study only considered students in a single institution, the sample is in no way representative of a national or larger body of students. However, these studies align with the findings reported in this paper, that delayers have higher GPAs in college than do immediate enrollers, and that specifically, travel delayers do better than non-travel delayers.

This study has shown that for a matched sample of delayers, traveling has a positive effect on academic performance, degree persistence, and civic engagement. Additionally, travel delayers had higher degree expectations than non-travel delayers, which is also likely related to these measured positive outcomes. In general, some attention has been paid to the benefits associated with traveling (Chen & Petrick, 2013; Durko & Petrick, 2013; Stone & Petrick, 2013). Studies have argued that traveling increases personal growth, knowledge, skills, mental and physical health, and strengthens relationships. As previously reported, gap year experiences where travel is a component have been reported to have a positive effective on participants (Coetzee & Bester, 2009; Haigler, 2012; Lyons et al., 2012; O'Shea, 2013).

Participation in work also had impacts for delayers. Non-working delayers in this study were found to have better enrollment outcomes. Specifically, they were the least

likely to enroll exclusively part-time (as opposed to exclusively full-time) when compared to immediate enrollers. Also, as compared to working delayers, non-working delayers were more likely to enroll in a public four-year institution than in a public two-year institution. These differences might be explained by the potential role of work when students enroll. If those students who delayed to work continue to also work when beginning their postsecondary education, working might inhibit more rigorous enrollment and attendance patterns.

Identifying "Gap Year" Delayers

This study also attempted to identify a group of students representative of those taking a gap year within a nationally representative sample of U.S. students. The only ways in which "gap year" students were significantly different from non-"gap year" students was in terms of community service participation. Overall, taking a "gap year" was associated with lower first-year GPAs and lower odds of having participated in community service in 2009. The fact that these findings conflict with the findings from other studies where "gap year" as a construct is accurately defined and represented suggests that perhaps this identification of gap year takers was not fully able to capture the true population of gap year takers. The problem of identifying true gap year participants within the national sample may be a result of a limitation in the data. The definition of a gap year specifies that the decision to delay is intentional (Jones, 2004; King, 2011; O'Shea, 2011b), which is an unobserved factor in this study. Certainly the reasons associated with a "gap year" delay may be the first step in identifying participants, an indication of their pre-delay intentions with respect to postsecondary enrollment is needed.

Delay Decision Timing

Because the temporal relationship between delay choice and enrollment choices was unclear, this study estimated models that accounted for both scenarios. To do so, students were matched in two ways: first based only on their pre-college characteristics, and then along those same variables but with the addition of their enrollment characteristics. Estimations from the two models were consistent in their direction and size relative to one another; however, for the academic outcomes, the magnitudes of the odds ratios were consistently larger than when students were matched on their pre-college characteristics only. This finding suggests that perhaps the effects of delay are greater if the delay decision happens before enrollment choices are made. With respect to measures of civic engagement, the magnitude of the odds ratios were either the same or slightly smaller than when students were match only on pre-college characteristics, suggesting that the *timing* of the delay decision may not have an impact on measures of civic engagement. Despite my speculation about the relationship between delay and enrollment decisions, this study can draw no certain conclusions about the effects of timing. It is likely that the sample contains a mix of students who made their delay decisions at a various points during their academic trajectory. However, based on the findings from this study that effects vary by reason for delaying, I suspect that effect also vary with respect to the timing of the delay decision.

Additional Limitations

In addition to the several data-related and methodological limitations presented earlier in this paper, the findings from this paper coupled with the findings from the first paper highlight additional limitations related to conclusions that can be drawn from this

dissertation. The first paper found that delayers and significantly different from immediate enrollers and that different subgroups of delayers (such as those who delayed to travel) are significantly different from one another. Then, this paper used propensity score matching to create matched samples of students receiving the specified delay treatment with others who either enrolled immediately or delayed for different reasons. Thus, the causal effects found from using propensity score matching are only relevant to students with the characteristics of those receiving the treatment. Specifically, the finding that delaying results in higher postsecondary GPAs is only applicable to students who "look like delayers." So, for students with very different characteristics than typical delayers, delaying may not have the same (positive) effect on GPA. Similarly, the finding that, among delayers, travel delay resulted in positive effects is only applicable to delayers that have the same characteristics of travel delayers. And since the first papers showed that travel delayers are significantly different from non-travel delayers in general, how travel may affect delayers with different types of characteristics is unknown.

Recommendations for Postsecondary Practices

This paper provides several recommendations for postsecondary delay practices related to postsecondary delay. First, this study suggests disseminating the findings from this paper to students, families, and guidance counselors involved in making decisions about if and how students might delay. These constituents would benefit from information about the effects of various types of delay to better guide students. While for some students, delay might be a choice based on not wanting to attend or not feeling ready for college, or having an interest in pursuing a particular activity, for others, delay may be less of a choice than a necessity, if there are financial, family or health-related

barriers. Regardless of the underlying cause, findings from this study suggest that for certain students, incorporating a travel component may help to mitigate some of the overall negative effects of delaying. Addressing knowledge gaps surrounding varying delay effects is important to students making decisions about if and how to delay.

Second, this study suggests that while delay may not be desired or needed for all students, those expressing a need to or interest in delaying may experience important benefits. Specifically, this study showed that for students with characteristics similar to the current group of delaying students, delay in general was associated with higher GPAs. This may be indicative of the fact that for students who fit a particular profile (and are interested in delaying), a delay may be an opportunity to have experiences that ultimately increase academic drive, focus and engagement – something also described by the gap year participants. As a result, this study suggests that, for some students, colleges consider delaying as an enhancement to their pre-college experiences.

The positive findings related to GPA, however, should not overshadow the negative effects related to degree completion. Recent years have seen considerable attention paid to discouraging students from delaying their postsecondary education, and instead enrolling immediately (Adelman, 2006) in order to address the degree completion issue. It appears that despite increasing students' academic focus or drive as indicated by higher GPAs, delaying students are still enrolling with lower attendance intensities and in less-than-four year institutions more frequently than immediate enrollers.

As a third recommendation, this study suggests supporting delaying students to attend more rigorous institution types. Based on the findings that for a matched sample of delayers and immediate enrollers, delaying has a positive effect of GPA but a negative

effect on enrollment choices and degree completion, this study suggest that delaying students may need additional support and direction in order to be realize the benefits of delaying in terms of degree completion. For students who fit a particular profile, delaying may have positive effects on attitudes and behaviors that affect academic performance as measured by GPA, but their ability to complete a degree may be hindered by their enrollment choices. Thus, directing resources to help student who want or need to delay to enter into more rigorous institutions could be an important step in mitigating some of the negative effects of delaying.

In addition, as travel was found to have a positive impact on degree persistence among delayers, , this study suggests exploring ways in which travel-related delay experiences can be replicated in diverse settings. Although these data did not capture the nature of students' travel experiences or the proportion of overall delay time spent traveling, it is worthwhile exploring ways that low-cost and/or short-term travel experiences might be facilitated. Particularly for students who need to delay for financial, family, or health-related reasons, additional funding sources could help introduce travel activities into delay experiences, which may help to mitigate some of the overall negative effects of delaying. As an extension, this study suggests identifying travel delays in particular as a positive pre-college experience and encouraging students interested in delaying to incorporate elements of travel.

Areas for Further Research

This study suggests several areas for further research. First, determining the stage at which students make delay decisions with respect to other enrollment decisions is critical – both in understanding the impact delay experiences have on enrollment choices

as well as understanding the true effects of delay on postsecondary outcomes. Second, this study suggests deeper exploration of the disconnected findings with respect to academic outcomes between delayers and immediate enrollers. Presently, only speculation exists to explain how delay operates in order to have a positive effect on students' GPAs, but a negative effect on their degree persistence. Developing a better understanding of this discrepancy is critical, and a qualitative study may be necessary to understand students' motivations for enrollment and attitudes towards degree completion.

Third, this study suggests a cohort study comparing students who delayed for different reasons with students who never enrolled. The BPS:04/09 data set does not contain information on students who never enrolled in postsecondary education, making comparisons between delayers and non-enrollers impossible. Thus, throughout this study, the assumption has been that the alternative to delaying was enrolling immediately, but in reality, for many students, the alternative may have been never enrolling. This suggests that immediate enrollers may not be the most relevant comparison group for delayers, but instead that non-enrollers may be more appropriate.

Finally, this study suggests further exploring how travel experiences may serve to benefit students above and beyond the effect of other delay experiences. Though travel is often a costly activity, it is worth understanding which and how critical elements of travel may be replicated in other settings to benefit other delaying students. An exploration of international travel delay in the form of a gap year is the focus of the next paper in this dissertation.

PAPER #3 – WHAT'S IN A GAP?: WHY AMERICAN YOUTH PARTICIPATE IN A GAP YEAR AND HOW THEY BENEFIT AS INDIVIDUALS

Introduction

The idea of a "gap year" has generated substantial interest among popular media sources, academic scholars, and prestigious institutions in the United States in recent years. In this study, I define a gap year[5] as an intentional, one-year delay of postsecondary education for the purpose of personal growth and learning, often including travel, work and/or service. The American Gap Association contends that gap years can take place either domestically or internationally, but must involve, "increasing self-awareness, learning about different cultural perspectives, and experimenting with future possible careers" ("What is a Gap Year?," 2013). Gap year practices are more common for students in the United Kingdom, other parts of Europe, and Australia than they are in the U.S.; however, they are increasing in popularity in the U.S. as evidenced by a booming gap year program industry, the prolific publication of resource guides, and the inception of the American Gap Association, an accreditation and standards-setting organization for gap years that is recognized by the U.S. Department of Justice and the Federal Trade Commission.

Although there have been few empirical studies undertaken to examine gap year experiences for American students, in general, it is believed that taking a gap year is a valuable endeavor. U.K. Foreign Secretary, Jack Straw, has publically promoted gap year

[5] The term "bridge year" is emerging in literature and practice as a replacement for "gap year" as I have defined it. In this paper, I use the term "gap" year for the sake of efficiency and consistency with prior research. In other literature the term "gap year" has also been used to describe a similar year of travel between college and graduate school or career (Lyons et al., 2012) or any other break in one's educational or career path (Bull, 2011; O'Reilly, 2006; Simpson, 2005).

practices, arguing that, "Taking a gap year is a great opportunity for young people to broaden their horizons, making them more mature and responsible citizens. Our society can only benefit from travel which promotes character, confidence, [and] decision-making skills" (as cited in Simpson, 2005, p. 453). To date, much anecdotal evidence as well as some peer-reviewed studies have identified positive effects associated with participation, relating to language development ("Bridge Year Program," n.d.; Clagett, 2012; King, 2011; Lyons et al., 2012; Simpson, 2005; Spenader, 2011), personal growth (Birch & Miller, 2007; "Bridge Year Program," n.d.; King, 2011; Knight, 2014; Martin, 2010; O'Shea, 2011b; Stehlik, 2010), and college and career attainment for students in the U.K. and Australia (Birch & Miller, 2007; King, 2011; Knight, 2014; Martin, 2010; O'Shea, 2011b; Stehlik, 2010). Across the U.S., no fewer than 160 colleges and universities have begun to embrace the idea of a gap year, with differing degrees of intensity ("University in Support of Gap Year," n.d.) Most commonly, institutions provide deferral information, and opportunities and requirements on their admissions websites. For example, Middlebury College's admissions page includes, "A Special Message from the Dean of Admissions to All Prospective Applicants to Middlebury College" about taking a gap year. Harvard University recommends taking a gap year in its acceptance letter. The University of North Carolina – Chapel Hill offers scholarships to students wanting to take a gap year through their Global Gap Year Fellowship at the Campus Y. Princeton University has started its own, internally operated Bridge Year Program which,

> offers a truly innovative approach to learning, one that is more experiential and more profoundly transformational than anything most students entering college will have encountered during high school. The knowledge, understanding, and skills gained through the Bridge Year serve not only to enhance a student's

> undergraduate experience at Princeton, but also contribute to the overall strength of the University's educational community. ("Bridge Year Program," n.d.)

Belief in the benefits of gap or bridge year experiences to both students and institutions drive increasing support from colleges and universities.

Despite the growing popularity, there is a dearth of scholarly research on nature and outcomes of gap year experiences in general (Baum et al., 2010; King, 2011; O'Shea, 2011b; Perna, 2005; Stehlik, 2010). Of the existing peer-reviewed research, which is limited to approximately ten studies, only one focuses on American students. Also, few of the studies have included sample sizes of greater than 30 (O'Shea, 2011b; Perna, 2005; Spenader, 2011).

The previous papers in this series addressed postsecondary delay at the national level and described students' reasons for delaying, how student characteristics varied with respect to delay reasons, and the effects of delaying associated with particular delay reasons. Findings show that all else being equal, students who delay postsecondary education for travel perform better in college and are more civically engaged than students who delay but do not travel. These findings underscore a need to identify how travel may be operating to benefit students during their delay. Also of note, the majority of this research has focused on the experiences of students taking international gap years, as being abroad allows students to explore different cultural perspectives – a key element of a gap year experience. In the U.S., the majority of commercialized gap year programs operate internationally and it is typical for independent gap year participants to spend time outside of the U.S. Still, an understanding of international gap year experiences for American youth is largely undeveloped. In this paper, I examine participants and their

experiences in three different international gap year programs operating in Ecuador in the fall of 2013.

Statement of Purpose

Presently, much is known about the college choice process, as many scholars have developed and tested related frameworks (Cabrera & La Nasa, 2001; Perna, 2006). However, it is unclear as to whether the choice to take a gap year can be conceptualized using these frameworks, or whether understanding this choice process requires expanding or recreating current models. Similarly, factors related to college student success are fairly well understood. And, while gap year activities and program elements are well known and clearly advertised, there is no conceptual understanding of how these specific activities, elements, and related experiences impact participants.

To contribute to the larger understanding of postsecondary delay and outcomes, the overall goal of this paper is to utilize qualitative data to probe deeply into the experiences of students participating in gap year delays. The first goal is to better understand the gap year choice process, and specifically why and how American youth choose to take a gap year. The second goal is to provide insight into previous findings about the positive effect of travel-related delay compared to other types of delay by interviewing students taking an international gap year about their experiences. Building off of the second, the third goal is to identify valuable elements of gap year experiences that may be replicated in other settings in order to provide advantageous opportunities for a broader group of youth. This paper begins with an overview of gap years and their role in the U.S. educational landscape.

Gap Year Activities and Experiences

A gap year as defined here may involve any number of activities and experiences in a variety of locations. While many students may elect to design their own gap year experience – organizing their own jobs or service work and traveling independently – many students in the U.S. elect to enroll in a structured gap year program (Bull, 2011). The Center for Interim Programs, based in Princeton, New Jersey, is the first and longest-running independent gap-year counseling organization in the U.S. The organization reports having a database of over 6,000 programs from which students may choose. USA Gap Year Fairs, a national circuit of events, brings together 33 reputable gap year organizations, interested students and parents, high school college counselors and gap year experts, throughout the country. American Gap Association, the newly formed gap year accreditation organization, is currently accrediting, or in the process of accrediting 19 programs. While the activities and experiences offered in these programs vary, they all contain some elements of work, service, and travel, either domestic or international, with international service becoming an increasingly popular component of a gap year experience (Gray, 2011; O'Shea, 2011; Simpson, 2005

Guiding Frameworks

This study investigates two distinct processes: the choice to take a gap year, and the experiences and impacts of a gap year. Several established frameworks guide the study of these two processes. In particular, to understand the choice to participate in a gap year, I draw on Perna's (2006) theory related to student college choice. Second, in examining the implications of gap year experiences for youth as they move forward in

their lives, particularly into college, I utilize Kuh's (2006) and Perna and Thomas's (2008) theories connecting pre-college experiences to post-college outcomes.

Student College Choice

The first part of this study expands Perna's (2006) proposed conceptual model for student college choice to examine the choice to participate in a gap year prior to enrolling in postsecondary education. College student choice has been examined by a variety of perspectives, mainly from economic and social theory. From the economic perspective, Becker's (1993) theory of human capital assumes that choices or investments are, "rational responses to a calculus of expected costs and benefits" (p. 17) and that "education and training are the most important investments in human capital" (p. 17). Scholars have utilized this theory to posit that students, along with their parents, undertake a cost-benefit analysis when making college choices (Manski & Wise, 1983).

The short- and long-term benefits of higher education to both individuals and society are widely publicized and promoted (Baum et al., 2010; Becker, 1993; Perna, 2005). Short-term benefits include the academic, social, and cultural experiences of college, such as learning for enjoyment, participating in events, and increasing social status, as well as lower initial unemployment rates (Perna, 2005). Over the longer-term, college graduates can expect to see significantly higher earnings, full-time year-round work, good health insurance, pension plans, and have greater civic participation (Baum et al., 2010; Bourdieu, 1986). Economists have consistently shown a jump in earnings with attainment of a bachelor's degree (Baum et al., 2010), and education has also been shown to have positive effects on health, civic engagement, and appreciation of culture (Becker, 1993). The costs associated with college enrollment include the monetary aspects of

tuition and fees, as well as the loss of earnings and leisure time associated with enrollment in postsecondary education (Bourdieu, 1986; Perna, 2005). Economic theory views college choice as a weighing of these costs and benefits.

On the other hand, social theory, and specifically Bourdieu's (1986) theory of cultural and social capital, argues that one's background characteristics contribute to one's agency in the decision-making process. Social capital is defined as, "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group" (Bourdieu, 1986, p. 51). Bourdieu (1986) argues that various forms of capital can be exchanged to acquire other forms of capital and used to one's benefit. Thus, social capital is comprised of the relationships, connections and social network that allow individuals to gain access to cultural and economic capital. Cultural capital is divided into three types: embodied, objectified, and institutional. Bourdieu (1996) defines embodied cultural capital as the "long-lasting dispositions of the mind or body" or "the work of acquisition is work on oneself (self-improvement)." Physical goods or possessions such as "pictures, books, dictionaries, instruments, machines, etc.," are examples of objectified cultural capital. Finally, institutional capital is "a form of objectification which must be set apart because, as will be seen in the case of educational qualifications" (Bourdieu, 1986). Drawing heavily on this framework, Lareau (2011) showed that social class is strongly related to the choices that parents make with respect to raising their children and determining their educational trajectories. Specifically, she found that middle-class families were able to leverage both financial and

knowledge-based resources in order to make education-related decisions in distinctly different ways from working-class families (Lareau, 2011).

In her proposed conceptual model of student college choice, Perna (2006) (see *Figure 5*) argues that alone, the economic and social theories each are lacking in their ability to fully explain both the cost-benefit analysis undertaken by students in the college-choice process and the ways in which social and cultural factors influence individuals' considerations of criteria for making this decision. For this reason, her model integrates both perspectives and serves as a framework for understanding differences in enrollment choices for students from different social and cultural backgrounds.

Perna (2006) argues that the college choice process is situated within four contextual layers: the social, economic, and policy context, the higher education context, the school and community context, and the *habitus*. This nested model's inward orientation specifies that each of the outer layers influences each of the successive inner layers, which all contribute to college choice. At its core, individuals' college choice is informed by students' *habitus* (Bourdieu, 1986), which Perna (2006) defines as, "an individual's internalized system of thoughts, beliefs and perceptions that are acquired from the immediate environment, [which] conditions an individual's college-related expectations, attitudes, and aspirations" (p. 113). The habitus is related to individuals' demographic characteristics and forms of cultural and social capital (Bourdieu, 1986; Coleman, 1988; Lareau, 2011), and their human capital, in terms of academic preparation, achievement, and economic capital in terms of family income and financial aid. These elements, (along with the outer three contextual layers) directly influence the final cost-benefit analysis. Perna's (2006) model posits that the students' college-related

decisions are deeply informed by their habitus and that students with different thoughts, beliefs and perceptions about college and its cost and benefits will make decisions differently from one another.

In the second layer in Perna's (2006) proposed model, the school and community context comprises types and availability of resources at the students' high school, as well as the structural supports and barriers. Drawing on McDonough's (1997) theory of "organizational habitus" as well as Stanton-Salazar's (1997) conceptualization of "institutional agents," the school and community context supposes that social relationships and structures inform student college choice both positively and negatively.

The higher education context makes up the third layer, encompassing specific institutional characteristics and location, as well as the institutions' marketing and recruitment strategies and efforts. Finally, the social, economic, and policy context frame the entire process and include the demographic, economic, and public policy characteristics (Perna, 2006). All of these contextual layers directly and indirectly influence one another from the outside inwards, ultimately informing the students' cost-benefit analysis.

College choice has typically been understood as a decision of whether or not to enroll and then subsequently, a decision about how and where to enroll (i.e. full- or part-time, at a four- or two-year public or private institution), and potentially further, what to study. Focusing specifically on the first decision of whether and *when* to enroll, Rowan-Kenyon (2007) tested and confirmed the application of Perna's (2006) model for college enrollment timing to understand students' decisions to not enroll, enroll immediately, or

delay enrollment. She concluded that this model was appropriate for understanding student delay behavior.

In this study aimed to explore the decision of whether and when to enroll, I utilize elements of Perna's (2006) model to understand the choice to delay for the purpose of a gap year. *Figure 5* displays the expansion of Perna's (2006) conceptual model for student college choice, where college choice includes no enrollment, immediate enrollment and delayed enrollment specifically for a gap year as well as for other reasons. This study focuses specifically on the choice to delay college enrollment for a gap year. While not addressed in this model or study, gap year participants also partake in the decision of how and where to enroll, though when and how this decision takes place is not clearly defined in Perna's (2006) model or in general.

In another arm of higher education research, economists have used utility maximization theory to model student college choice (Avery & Levin, 2010; Hoxby, Avery, National Bureau of Economic Research, 2012) in ways that align considerably with Perna's (2006) model. Here, given any number of college choices, students select the option that maximizes their utility. Hoxby and Avery (2012) used a random utility framework to understand the *undermatch* phenomena among high-achieving low-income students, arguing that students from different income and achievement backgrounds see utility maximization differently and consequently make different decisions. This is similar to Perna's (2005; 2006) hypothesis that students' habitus influences their engagement with the cost-benefit analysis surrounding college choice. Related to gap year choice, high school graduates may see a variety of choice options that include not attending college, attending college immediately, or attending college but after a delay.

And if they delay, students may elect to participate in a variety of different activities. In this case, theory suggests that students' selection of gap year participation and activities is tied to their individualized perception of the utility maximization, or obtaining the greatest value, and different types of students see these choices differently.

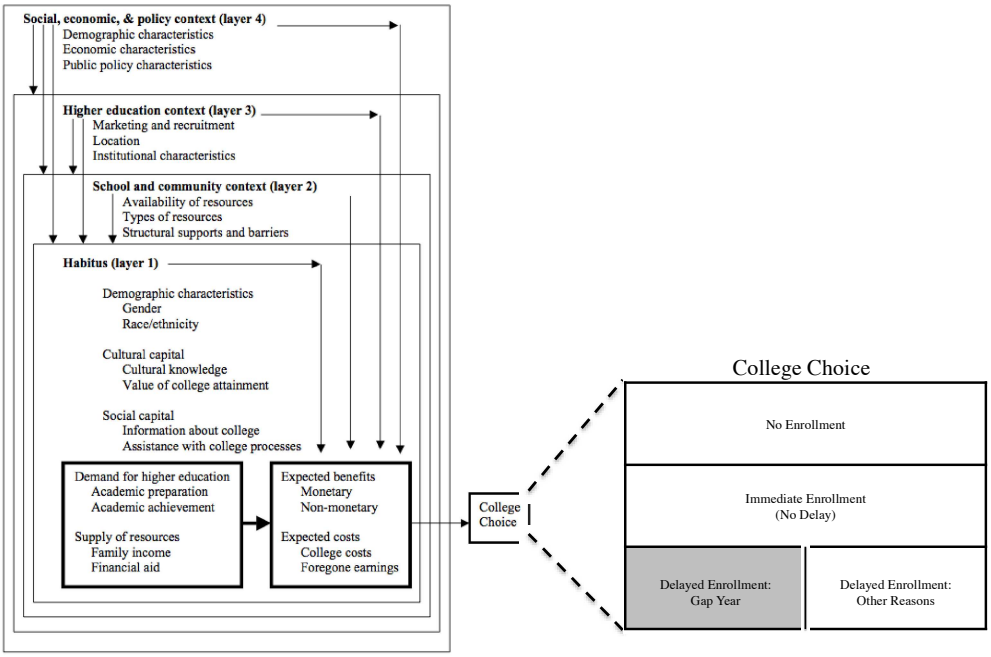

Figure 5. Expanding college choice in Perna's (2006) proposed conceptual model.

Pre-College Experiences

The second part of this study explores a conceptual model of success that examines how individuals' pre-college experiences and contexts impact future outcomes, particularly in the postsecondary educational environment. The concept of "student success," as measured by postsecondary academic outcomes, is of interest to and has been conceptualized by several scholars (Adelman, 2006; Conley, 2010; Kuh et al., 2006; Perna & Thomas, 2008). Typically, these indicators have included measures of college

readiness, enrollment, achievement, and attainment (Perna & Thomas, 2008). As this study does not directly measure any specific postsecondary outcomes, but rather participants' perceptions of their gap year's influence both immediately and in the future, I refer to "student success" more broadly, to include the ways in which they define their own successful development and experiences.

In general, established frameworks examining student success draw on some combination of social, economic, and education theory, which dictate that individuals' social, cultural and human capital are significant determinants of their success (Perna & Thomas, 2008). While the lines between the forms of capital are never completely clear, as described above, social capital generally refers to individuals' relationships, connections and social network, while cultural capital is individuals' cultural background, ways of being and dispositions, as well as possessions that connote status and experiences (Bourdieu, 1973). Human capital is defined as a persons' knowledge and skill set (Becker, 1993). In particular, *cultural and social reproduction theory* posits that individuals' future status is largely determined by their family background and social class, whereby existing structures are maintained (Bourdieu, 1973; Perna & Thomas, 2008). In this model, higher levels of social and cultural capital foster success and are reinforced, making it difficult for those with less valued types of capital to advance. Human capital theory asserts that a workers' knowledge and skills directly contribute to his or her productivity, and ultimately success (Becker, 1993). Accordingly, individuals with more valued cultural, social, and human capital are positioned to be more successful in educational or employment ventures.

Kuh (2006) proposed that students' pre-college experiences (all forms of capital), namely enrollment choices, academic preparation, aptitude and college readiness, family and peer support, motivation to learn, and demographics, influence their engagement as students and ultimately determine their post-college outcomes. This notion that pre-college characteristics influence post-college outcomes is closely related to concepts in Perna and Thomas's (2008) mode of student success. Specifically, Perna and Thomas (2008) argue that four, nested contextual layers influence student success: the social, economic, and policy context, the school context, the family context, and the internal context. Critical to both models and understandings of student success are individuals' dispositions and ways of being. Kuh (2006) argues that students' aspirations and motivations are one of the best predictors of their college success, and that students with diverse experiences are more engaged while in college. Perna and Thomas (2008) also posit that college success is influenced directly by students' attitudes, motivation and behaviors.

Intended vs. incidental experiences. During a delay or gap year, there are variety of experiences youth may choose to have, and likely a variety of outcomes associated with those experiences. In general, the goal of gap year programs is to provide students with experiences that benefit them many ways. Studies of curriculum theory and program implimentation have differentiated between what is *formal* or *intended* and what is actually *ideal, instructional, operational, and experiential* (Goodlad, Klein, & Tye, 1979) and intended curriculum is as defined by the policies of the state. Related, some attention has been paid to "incidental learning," defined as, "learning which apparently takes place without a specific motive or specific formal instruction and set to learn the

activity or material in question" (as cited in Tresselt and Mayzner, 1960). It is reasonable to assume that with respect to gap year experiences, participants are exposed to both intended and incidental experiences and learning. I define intended program experiences as those that are organized or structured by the program, such as training seminars, homestay experiences, and service work. Incidental or unanticipated experiences are typically a direct result of, or response to the intended experiences and included experiences, such as making connections and building relationships, confronting challenges, enjoying one's self, and feeling pushed out of one's comfort zone.

While youth may have many intended experiences, below I identify three common to international gap years: cross-cultural experiences (often, but not always, in the context of travel), experiential educaiton and service learning. This is by no means comprehensive, and certainly all gap year experiences do not include all of these elements. These three intended experiences are meant to highlight ways in which a gap year might influence students attitudes, behaviors and motivations as well as their forms of capital, and ultimately their future success.

Cross-cultural experiences. The benefits of cross-cultural experiences and exchanges have been frequently investigated in the context of general travel and study abroad. Scholars have argued that traveling and interacting with people from other cultures increases personal growth, knowledge, skills, mental and physical health, and strengthens relationships (Chen & Petrick, 2013; Durko & Petrick, 2013; Stone & Petrick, 2013) . Exposure to "host-country counterparts," or peers within the new culture in the context of study abroad, has been shown to increase students' personal development (such as independence and open-mindedness), intercultural development

and expansion of social network, academic commitment and focus, and career trajectory (Dwyer & Peters, n.d.; Hadis, 2005b; 2005a) . In general, cross-cultural interactions are believed to have an impact on individuals' attitudes, behaviors, and beliefs.

Experiential education. Experiential education is "education (the leading of students through a process of learning) that makes conscious application of the students' experiences by integrating them into the curriculum" (Carver, 1996, p. 150). Foundational theory on experiential education is attributable to Dewey (1916), who argued that experiential education would serve as a vehicle for democracy building. Its core pedagogical principals include authenticity, active learning, drawing on student experience, and providing mechanisms for connecting to future experience. Through this, "students develop habits, memories, skills, and knowledge that will be useful to them in the future" (Carver, 1996, p. 152). According to Carver (1996), the outcomes of experiential education fall into three categories – agency, belonging, and competence. Students develop the skills and behaviors necessary to become active agents of change in their communities, a sense of belonging accompanied by a notion of rights and responsibilities to and for all, and finally, competence in the form of knowledge and skills to apply what they have learned in their daily lives.

Service learning. Service learning, "is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities" (Jones, 2004; King, 2011; Martin, 2010; National Service-Learning Clearinghouse, n.d.) . Stukas (1999) argues that service learning yields several benefits including self-enhancement, understanding of self and the world, value-expression, career development, social

expectations and protection (Birch & Miller, 2007; Martin, 2010; Stukas, Clary, & Snyder, 1999). The Corporation for National Community Service specifically describes volunteering as a mechanism to develop social and human capital, which leads to greater employment opportunities (Martin, 2010; Spera, Ghertner, Nerino, & DiTommaso, n.d.). Specifically, they indicate that service work increases social capital in the form of increasing professional contacts, durable networks, employment leads, and social relationships. Human capital is increased through the acquisition of knowledge, skills, abilities, leadership opportunities and gaining work experience.

Conceptual Framework

This study explores two conceptual models related to student college choice and pre-college experiences that build individuals' capital. The first framework examines the choice to delay within the context of Perna's (2006) proposed conceptual model for student college choice. I hypothesize that the choice to delay, and specifically to take a gap year, is informed by many of the same contextual factors that influence overall college choice.

The second conceptual model builds on both Kuh's (2006) and Perna and Thomas's (2008) frameworks through exploring the contributions of delay to students' pre-college experiences. This examination accepts and assumes that students' pre-college experiences directly impact their success while in college. As defined, pre-college experiences and characteristics include demographic characteristics and family background, measures of academic preparation and achievement, and attitudes, behaviors, and motivations. This study posits that delay experiences (particularly gap year experiences) affect participants' attitudes, behaviors, and motivations and provide

students with the opportunity to gain various forms of human, cultural and social capital, which ultimately impacts their ability to be successful. Given what is known about the contributions of pre-college experiences to general student success {Kuh:2006vz, Perna:2008bu}, it is logical to assume that a year spent participating in cross-cultural exchanges, experiential education and/or service learning might have some influence on future success. Previous studies have shown a linear relationship between years of schooling and lifetime earnings (Baum et al., 2010), and it may be that a gap year experience operates similar to an additional year of schooling. More specifically, it provides learning opportunities beyond what is typically offered by a traditional high school experience as well as the opportunity to acquire additional forms of human, cultural and social capital. Finally, these models help explore how the potential outcomes of gap year experiences might factor into the choice to delay one's post-secondary experience.

Review of the Literature

As little research has been conducted on American students taking a gap year, this literature review primarily utilizes data and findings derived from studies conducted in Australia and the U.K. Following a description of past studies, I synthesize the existing literature on gap year participants, their motivations for taking a gap year, gap year experiences and activities, the reported benefits of taking a gap year, and criticisms of gap year experiences. Finally, I conclude with an identification of the gaps in the literature and gap year theory.

Gap Year Participants

Research on gap year participants has considered demographic and other characteristics depicted in Perna's (2006) habitus layer. Studies in the U.K. and Australia report that gap year participants are predominantly white, disability-free, and females from middle-class backgrounds who had attended private schools (Birch & Miller, 2007; Horn et al., 2005; Jones, 2004; King, 2011; Martin, 2010). However, Jones (2004) argues that the demographics of gap year participants are changing, and the stereotype of affluence is diluting. King (2011) reports that anecdotal evidence in the U.K. is indicating that students from less privileged backgrounds are beginning to take a gap year in order to work and save money (King, 2011). In terms of academic preparation and achievement, some studies have found that youth who take (or intend to take) a gap year are lower-achieving academically (Birch & Miller, 2007; Martin, 2010). Specifically, these Australian-based studies posit that low-achieving students have lower levels of motivation and more uncertainly about postsecondary education, and may have not gained admission into college and are thus more likely to take a gap year (Birch & Miller, 2007; Martin, 2010).

Motivations for Taking a Gap Year

In conceptualizing patterns of international student movement, Mazzarol and Souter (2002) identify "push and pull" factors that inform student decision-making. Specifically, they define push factors as internal influences that persuade students to seek education outside of their home country and pull factors as elements that make a destination country seem attractive (Mazzarol & Soutar, 2002). These broad categories offer a useful way in which to organize reported reasons and motivations for taking a gap

year described in previous studies The literature suggests that student gap year choice is motivated by a number of contextual circumstances that serve as push factors as well as a host of expected benefits, or pull factors. As access to elite institutions and domestic job markets become increasingly more competitive, scholars have argued that high school graduates are looking for ways to distinguish themselves from their peers and gap year experiences can serve to achieve this (Heath, 2007). Gap year programs are known to market (and deliver) valuable capital that can be translated into entrance to prestigious schools and competitive jobs (Lyons et al., 2012; O'Shea, 2011a; Simpson, 2005).

Prior qualitative research has found that youth choose to participate in a gap year for a variety of personal, educational, career-related and financial reasons (Haigler & Nelson, 2005; O'Shea, 2011a; Stehlik, 2010). At least three studies reported that overall, gap year participation is largely driven by students' feelings of academic burnout and needing an academic break (Haigler, 2012; Lyons et al., 2012; O'Shea, 2011a). Additionally, O'Shea (2013) found that some participants reported being influenced by friends, family members, or school personnel. Some studies have shown that students who take a gap year commonly seek self-exploration, personal growth and development in the way of maturity and independence (Haigler & Nelson, 2005; O'Shea, 2011a; Stehlik, 2010). Participants also reported wanting to acquire knowledge about the world, other languages and cultures, as well as explore and clarify academic and/or career goals (Heath, 2007; O'Shea, 2011b; 2013; Stehlik, 2010; Torpey, 2009). Stehlik (2010) found that participants wanted to have work experiences, not only to earn money to finance future educational pursuits, but to gain experiences that could be added to their resumes and leveraged for educational and employment purposes. O'Shea (2011) also found that

the volunteers in his study simply wanted to enjoy themselves on a year of travel with friends. As to be expected in a volunteer-oriented gap year program, participants also reported altruistic motivations (although O'Shea found these to be secondary to personal motivations).

The literature suggests that the current economic and employment conditions, the higher education climate, students' own high school experiences, as well as their social network, influence gap year decisions. Additionally, students are drawn to a series of expected benefits, which makes Perna's (2006) a useful framework with which to examine gap year choices. In the next section, I describe another arm of gap year research addressing the reported benefits of participation.

Benefits of a Gap Year

Previous studies have concluded that personal gains, college and career preparation, as well as global citizenship are three of the primary benefits to gap year experiences.

Personal benefits. Both peer-reviewed literatures as well as mainstream media have reported a vast number of personal benefits associated with taking a gap year, based on both participant self-report and staff and researcher observations. Based on analysis of gap year multimedia, Heath (2007) and Stehilk (2010) note that uniformly, gap year programs promote the following five benefits: development of "soft skills" (such as communication, organization and team working skills), self-development and personal enrichment, self-reflection, greater maturity and readiness for college, and greater attractiveness to employers. Simpson (2005) also identified broadened horizons, leadership and teamwork skills as commonly advertised benefits by programs.

Among the research community, some of the most commonly cited benefits include confidence and independence, self-development, practical, personal, or life skills, and maturity (Coetzee & Bester, 2009; Haigler & Nelson, 2013; Jones, 2004; King, 2011; O'Shea, 2013). Other scholars have cited benefits in terms of social values (Birch & Miller, 2007; Clagett, Connelly, Bull, & Rubin, 2011; Haigler & Nelson, 2013; Jones, 2004; Martin, 2010; Sparks, 2010; Torpey, 2009), passion for learning, perspective, and helping participants learn to take things in stride (Birch & Miller, 2007; Clagett et al., 2011; Haigler & Nelson, 2013; Jones, 2004; Martin, 2010; Sparks, 2010; Torpey, 2009). O'Shea's (2011, 2013) reports that in his study, former gap year participants, "made significant gains in personal, civic, moral, and intellectual development" (2011, p. 576). He also describes learning about socio-political issues, current events and specific cultures, as well as learning to think critically about commonly accepted institutions, including development work itself, increased perceptions of self-efficacy, tolerance, evolving religious perspectives, increased appreciation for community life and family life, decline in materialism and consumption, enhanced decision making, greater understanding of self, "ability to communicate with others, tenacity, patience, maturity, empathy, independence, reasoning, criticizing and acceptance of responsibility" (p. 572).

Although this list of personal benefits relies heavily on participant self-report data, overall, it highlights an important trend – that gap year participants actually see their participation as having tangible, meaningful effects on their lives, as do observers. Additionally, an empirical study using 2,502 participants confirmed that gap year takers have *lower* levels of motivation while in high school, but *higher* levels of motivation

while in college than their non-participating peers (Martin, 2010), empirically suggesting that participation in a gap year may increase motivation.

College preparation and career development. Some scholars have directly connected the shorter-term personal benefits of gap year experiences with having longer impacts on college preparation and career development. Gap year experiences have been found to enhance future educational endeavors and performances, and have been associated with greater chances of college motivation, success, and completion (Birch & Miller, 2007; Clagett et al., 2011; Hulstrand, 2010; Jones, 2004; Martin, 2010; Sparks, 2010; Torpey, 2009). O'Shea (2011) found that gap year participants reported being more engaged in their studies and activities after returning from their year of service abroad. He also observed alumni feeling more confident and prepared to live independently following a gap year.

At least two studies have examined the effect of gap year experiences on grades (Birch & Miller, 2007; Clagett et al., 2011; Hulstrand, 2010; Nussbaum, 1994; Torpey, 2009). Among nearly 7,000 students at the University of Western Australia, Birch and Miller (2007) found that taking a gap year had a positive impact on students' academic performance and motivation in college, and that for students who were lower-achieving in high school, the positive impacts were even greater. They concluded that there may be merit in encouraging some students to take a break between high school and university, particularly for students who are expected to have below average performance at university and who are unsure of their future directions. To date, the only known study of this nature conducted in the U.S. is still unpublished (Clagett et al., 2012). Clagett (2012) found that among students at Middlebury College, students who took a gap year "over

performed" in terms of grade point averages as compared to those who did not, even when controlling for their "average academic rating," which is a numerical score given to students during the admissions process, known to be the best predictor of college performance that a school can make (Clagett, 2012). The second paper in this dissertation examined the effect of gap year participation on college completion, which is the first known exploration of this issue.

Additionally, a gap year is also thought to provide greater benefits to students than a junior year abroad, informing their entire college experience (Hulstrand, 2010; Sparks, 2010), as anecdotal evidence identifies "reinvigoration" and newfound excitement about starting college (Hulstrand, 2010; Nussbaum, 1994; O'Reilly, 2006; Torpey, 2009). Additionally, proponents suggest that gap year participants have less of an inclination to engage in risky behaviors in college (i.e. binge drinking) as compared to their non-gap year participating peers (Hulstrand, 2010; Maxwell, 2009; Nussbaum, 1994; O'Reilly, 2006). Finally, in terms of college-related effects, it is believed that individual participants are not the only beneficiaries of gap year taking, but that the institutions at which they matriculate benefit as well. As previously described in the introduction, Princeton University advocates that the Bridge Year program is not only beneficial to students but to the campus educational community too, as students presumably share their global experiences and perspectives with fellow classmates.

Gap years are also reported to help young people to be prepared for the workforce (Creswell, 2012; Maxwell, 2009; Nussbaum, 1994; O'Reilly, 2006) as well as to understand career choices and make decisions about what to pursue (Hultrand, 2010; Jones, 2004). O'Reilly (2006) argues that skills and dispositions gained during a gap

year, such as curiosity, openness, appreciation for and acceptance of other cultures, willingness to take risks, as well as an understanding of one's place in the world, are transferable to current employment conditions. Haigler and Nelson (2013) report that 60% of the 273 American students interviewed for their study agreed that the gap year experiences influenced their academic and career choices. Based on a case study of three South African former gap year participants, Coetzee and Bester (2009) concluded that "the gap year did not lead them directly to make a decision on their career; rather, that experience had helped them improve their self-confidence and, thereby, their ability to make a decision on their career" (p. 616).

Simpson (2005) notes that many programs focus on helping participants to develop their "marketability" by adding to their CVs, or resumes, as they gain experience doing service work, particularly in the developing world. However, King (2011) found conflicting reports about the usefulness of gap year experiences when seeking employment among his 23 past gap year participants in the U.K. Some found it to be an incredible asset – even arguing that the mentioning of the work they had done on their gap year was critical to obtaining positions. On the other hand, some felt that many employers were uninterested or unimpressed by gap year experiences, as they have become increasingly more prevalent. This discrepancy points to a need for further research to explore the relationship between gap year experiences, career choice, and job acquisition.

Finally, using a gap year to work and save money for tertiary education has also been noted; for example, Coetzee and Bester (2011) found that South African students were motivated to take a gap year and work abroad in a foreign country with a stronger

currency in order to save money for future studies. However, for participants in commercial gap year programs, this is not a factor as they pay tuition and do not earn money (Coetzee, 2009; Goldrick-Rab & Han, 2011).

Becoming "global citizens." An innate part of an international gap year experience is significant time spent outside of the U.S., where students have the opportunity to experience new cultures and perspective. Simpson (2005) offers that,

> Over the last five years the 'gap year' has changed from a radical activity, dominated by charities and inspired by the travel of the hippie generation, to an institutionally accepted commercial gap year industry which helps form new citizens for a global age. (p. 447)

Heath (2007) notes that in the U.K., the concept of a gap year is increasingly being associated with the development of an active citizenry. Government officials and agencies are speaking out and setting policies to encourage youth to take gap years and volunteer, which is seen to be an important contribution to becoming an active and engaged citizen (King, 2011). O'Shea (2011) argues that a gap year, specifically one of international volunteering, provides "a growth in the ability to appreciate and critique other ways of living – developing what many volunteers conveyed as a 'connection with the larger world' – humanity – and its affairs" (p. 574). He quotes Nussbaum (1994) in asserting that as youth work to develop a sense of cosmopolitanism, they become global citizens, in their newfound sense of shared humanity and inclusion (Creswell, 2012; Maxwell, 2009; Nussbaum, 1994). When a gap year experience includes service work, anecdotal evidence also points to participants receiving benefits in terms of a feeling of self-worth and ability to make "meaningful" contributions to the rest of the world (Torpey, 2009). Thus gap years may serve as a mechanism for developing global citizens.

Critiques of Gap Years

Some scholars have raised concerns about the negative implications of gap year experiences. Lyons et al. (2012) argue that while gap year experiences and tourism in general *can* serve to promote global citizenship, they do not by default; and that in fact, tourism (even volunteer tourism) can have negative effects – reinforcing existing stereotypes for visitors and generating mistrust and skepticism from host communities (Lyon et al., 2012; O'Reilly, 2006; Simpson, 2004, 3005). Volunteer tourists and gap year travelers are sometimes criticized for being hedonistic and motivated by self-exploration, personal development, and an interest in travel, rather than a charge to "give," creating tension and complications. Additionally, the commoditization of the gap year experience and particularly service has led participants to expect a return on their investment, which seems contradictory to altruism (Lyons et al., 2012). Lyons et al. (2012) argue that, "the current gap year volunteer industry does not address issues of Western privilege and power" (p. 374) and in doing so, perpetuates colonialist relationship notions of "us vs. them," also echoed by Simpson (2004). The gap year experience is undoubtedly something available primarily to the privileged, and expectations that that participation will improve social standing are common (Heath, 2007; Lyons et al., 2012). Some have also asserted that the commoditization of the gap year and volunteer tourism has also caused a shift from organizations working *with* communities to develop meaning, beneficial projects, to commercial companies developing projects solely to attract foreign volunteers (Lyons et al., 2012).

Certainly international gap year experiences share criticisms associated with study abroad ventures and even domestically-based service endeavors (Davies, 2006; Hunter,

2006). However, considering the known value of service and experiential learning in general, understanding both the limitations and contributions of a gap year experience is important. A gap year is known to provide youth the opportunity to interact with the world in a new way, which portends many benefits to participants, their hosts, home university communities, and society in general.

Summary and Shortcomings in the Literature

While there are some concerns with the international gap year model, in general gap year experiences are believed to be largely beneficial to participants in a variety of ways. However, what is lacking is a more systematic understanding of the motivations for, experiences of and related effects of gap year participation, specifically for students in the U.S. Of even greater importance, however, is an identification of particular gap year elements and activities that are related to these reported benefits, which to date have not been investigated. No studies have directly attempted to link benefits to particular program elements and activities. This is particularly relevant, assuming that gap year programs do provide benefit to participants, as we think about how particular delay-related activities might be extrapolated and made available to students from varying socioeconomic backgrounds and delaying for different reasons. Also, as the gap year industry seeks to expand, a clearer picture of the differential effects of different program elements is needed. There is clearly much to be learned and developed in the industry; it is essential that programs and individuals continue to consider and think critically about both the benefits and potential harm to a variety of constituents, and the challenges associated with balancing multiple perspectives and agendas.

Methodology

This study takes a qualitative, and specifically phenomenological, approach to understanding the reasons that students choose to take a gap year, their processes and experiences, and the reported benefits. Specifically, I use semi-structured, in-depth interviews and focus groups (Appendix F), as well as survey responses of a total of 42 gap year participants and staff members in three different international gap year programs during the fall of 2013 in Ecuador. The following sections describe the sources of data and recruitment of gap year program and the participants, the data collect procedures, methods of analysis, the rationale for the study design, and the limitations. This paper addresses following questions:

1. Why do U.S. youth choose to take an international gap year?
2. What are the experiences youth have during an international gap year?
3. What are the participant-reported effects or benefits of participating in an international gap year?
4. How do the program elements and the experiences youth have (intended or incidental) operate to produce the reported effects?

Sources of Data

This empirical study utilizes data from three different programs operating in Ecuador during the fall of 2012: Global Citizen Year, Youth International, and Outward Bound. Figure 6 shows the organizationally published descriptions of the programs. These three organizations were selected for several reasons. First, they represent three key and distinct program types in the gap year market. Specifically, Youth International represents the most common type of gap year program. In this program structure, a group

of approximately 12 students and 2 leaders travel together to multiple destinations throughout the course while participating in a variety of activities. Global Citizen Year is a year-long immersion and service-oriented program. And Outward Bound is an outdoor adventure-based program that also draws participants up to age 24. Additionally, because of their need-based scholarships, the inclusion of Global Citizen Year in the sample introduced low-income students into the sample. Although not representative of all gap year experiences or even programs, the use of participants from three distinct gap year program types allowed for access to underlying themes that extend beyond the appeal and experiences of one particular program.

Through personal and professional connections in the U.S., I had previously established relationships with Global Citizen Year and Youth International and had prearranged visitations with their groups. I had hoped that while in Ecuador I would encounter gap year participants on other programs or traveling independently; thus, finding two Outward Bound participants was incredibly useful in expanding and diversifying my sample, and was not part of the systematic research design

Each year, ***Global Citizen Year*** recruits and trains a diverse corps of high potential high school graduates and supports them through a transformative "bridge year"* before college. Through intensive training and immersion in communities across Africa, Latin America (and eventually Asia and the Middle East) Fellows contribute to local efforts in education, technology, health and the environment while developing the global competence, entrepreneurial savvy and self-awareness they need to be transformative leaders in college, careers and life.

Youth International is an experiential learning program that combines international travel, inter-cultural exchange, adventure, volunteer community service work, and homestays. Teams of up to 14 people between the ages of 18 and 25 travel together with two group leaders. For a full 3-month semester, they explore three different countries in one region of the world. Through a balanced combination of experiences, each Youth International team member is set up for an intense and dynamic first-hand education about the region in which they are traveling. At the same time, they are presented with a unique environment and opportunity for self-discovery.

Outward Bound

Over the past 50 years, more than one million students in the United States have benefited from Outward Bound's powerful approach to "learning by doing." Outward Bound in the U.S. traces its roots to 1962 when courses were developed to prepare young people entering the Peace Corps and careers in foreign service. Today, Outward Bound offers course options that can fit into any student's Gap Year and Semester schedule through its national network of Regional Schools in the U.S. Since its founding, Outward Bound has believed in the power and the potential of young people. It has 50 years of experience successfully preparing students to confront the challenges they face in pursuit of their goals with self-confidence, tenacity and compassion.

Figure 6. Participating programs.

Data for this study were collected primarily through individual interviews as well as organizationally distributed, post-program surveys. Forty-two subjects were interviewed for this study; 36 were participants and 6 were staff. Participants were recruited on a voluntary basis. I spent several days with Youth International, and Global Citizen Year, and the trip leaders or program director introduced me to the groups. In both cases, I was given the opportunity to introduce my study to the group and explain my interest in conducting interviews and focus groups. In some cases, I approached the gap year participants directly to ask if they would be willing to participate in an interview. However, particularly after a few interviews had taken place, participants approached me, volunteering to be interviewed. On several occasions, participants thanked me for the opportunity to reflect on their experiences and indicated that the interview process had provided a useful space to process what they had learned in a new way. Outward Bound participants were encountered and recruited independently in a coastal town, several days after their program had finished. Citing decades of qualitative research, Creswell (2012) suggests conducting interviews with between five and 25 individuals in order to adequately understand a phenomenon, such as a gap year experience. However, in the case of this study, I engaged in interviews with a greater number of individuals so as not to exclude interested participants.

Table 17 shows basic information about the interview subjects, separating participants from staff. One of the subjects was a program owner and director, five were program staff members with titles ranging from "trip leader," "team leaders," and "Ecuador Program Director," and the remaining 36 were current gap year program participants. In terms of the participant group, just over half were female (53%), the majority were White (83%), and had attended public high schools (67%). Fewer than half of the participants had paid the full cost of the program (44%), which varied by program, indicating that the rest received partial or full (56%) scholarships. Finally, 94% of the participants planned to attend college in the fall of 2013. Gap year staff ranged in age from mid-20s to mid-50s, while participants ranged in age from 17 to 20 years old.

Table 17

Sample Characteristics

	Participants	Program Staff
N	36	6
Program (Ecuador)		
Global Citizen Year	23 (64%)	3 (50%)
Youth International	11 (31%)	3 (50%)
Outward Bound	2 (6%)	0 (0%)
Gender		
Male	17 (47%)	3 (50%)
Female	19 (53%)	3 (50%)
Race/ethnicity		
White	30 (83%)	4 (67%)
Black or African American	3 (8%)	0 (0%)
Hispanic or Latino	1 (3%)	1 (17%)
Asian	2 (6%)	0 (0%)
American Indian or Alaska Native	0 (0%)	0 (0%)
Native Hawaiian / other Pacific Islander	0 (0%)	0 (0%)
Other	0 (0%)	1 (17%)
More than one race	0 (0%)	0 (0%)
High school type attended		
Public	24 (66%)	
Private	9 (25%)	
Unknown	3 (9%)	
Program tuition paid[a]		
Full	16 (44%)	
Partial (received some aid)	16 (44%)	
Less than $500 (full aid package)	2 (6%)	
Unknown	2 (6%)	
Planning to attend college in Fall 2013		
No	1 (3%)	
Unsure	1 (3%)	
Yes	34 (94%)	

[a]Program tuitions varied by program.

Data Collection

Seventeen subjects were interviewed one-on-one, and 26 were interviewed in focus groups ranging in size from two to five participants. Varying interview and focus group sizes were utilized to diversify the overall data collection strategy and to allow more participants to be interviewed during the allotted time frame. Separate interview

protocols were used for program staff and participants, but focused similarly on topics related to gap year choice, experiences had, and the overall effects of gap year participation (see Appendix A).

Following the five-day visit with the Youth International group where all 11 participants were interviewed, I spent four days observing an "In-Country Training Seminar" with Global Citizen Year's southern Ecuador group (comprising half of all participants in Ecuador and roughly one quarter of all participants worldwide). There I conducted interviews and focus groups with 22 individuals. I then visited the northern group, observing participants in their immersed settings and interviewed four additional subjects. Finally, the Outward Bound participants were interviewed impromptu. All interviews took place in November and December of 2012 and all subjects had been on their gap year, and out of the United States for over two months.

Both Global Citizen Year and Youth International administered post-program surveys, which included questions asking participants to identify the most important elements of their overall experience on their learning, development, and growth. Both programs shared the results of these surveys with me after the course culmination.

Design Rationale

Maxwell (2009) offers five intellectual goals or uses of qualitative research. He argues that qualitative research allows for the understanding of meaning, context, and processes, as well as developing theory and causal explanations. Of particular relevance to this study, he describes the use of qualitative research to address some of the shortcomings or gaps left in the understanding of a phenomenon left by quantitative research (Creswell, 2012; Maxwell, 2009). In particular, he argues that qualitative

research allows for, "understanding the *meaning*, for participants in the study, of the events, situations, and actions they are involved with and of the accounts that they give of their lives and experiences" (p. 221). Additionally, he argues that through this approach, researchers can understand, "the processes by which events and actions take place," highlighting that a, "major strength of qualitative studies is their ability to get at the processes that lead to [outcomes]" (p. 221). Finally, he argues that causal explanations can be generated through qualitative research, citing the shift in general orientation towards the validity of this method. In this study, in-depth, semi-structured interviews as well as surveys were used to identify these processes.

Methods of Analysis

According to Creswell (2012), phenomenological research focuses on "describing what all participants have in common as they experience a phenomenon" (p. 76), in this case, a gap year experience. Broadly, the goal is to, "reduce individual experiences with a phenomenon to a description of the universal essence" (p. 76). The data collection procedure proscribed for this type of research involves interviews with individuals who have experienced the phenomenon, and analysis focused on understanding the "what" and "how" of their experiences (Bourdieu, 1973; L. A. Braskamp, Braskamp, Merrill, & Engberg, 2010; Creswell, 2012; Perna & Thomas, 2008).

Audio recordings of interviews and focus groups were transcribed and imported into the NVivo 10 qualitative data analysis software for coding. The first three research questions provided the larger framework for data collection and organization, and all data were categorized into three major topics: reasons for taking a gap year, experiences of a gap year, and effects of a gap year. Based on prior knowledge of gap year programs and

their participants, I began with several a priori codes or themes within each topic. A qualitative codebook was developed using both the a priori codes as well as inductive codes, whereby additional categories, codes, and themes are developed through emergent patterns observed in the data during analysis (Bourdieu, 1973; L. A. Braskamp et al., 2010; Creswell, 2012; Duckworth, 2013; Perna & Thomas, 2008). I also utilized the "Word Frequency" feature within NVivo to help guide the formation of salient themes and codes. Guided by the theoretical and conceptual frameworks, reasons for taking a gap year were coded thematically and organized into push and pull factors; experiences of a gap year were also coded thematically and organized into intended and incidental experiences; and finally, effects of a gap year were coded thematically and organized as non-cognitive skills such as attitudes and behaviors and forms of human, cultural, and social capital.

Once the data were coded, several of the analytic features in NVivo were utilized to extract patterns. Specifically, several of the "Query" features, including the node list were used to determine the most prevalent codes, and matrix queries to determine the number and proportion of the participants speaking to themes addressed within the codes. Additionally, coding queries revealed how specific codes were used in reference to one another. This was particularly useful in answering research question 4, which examined the experiences most closely related to the participant-reported effects. Finally, use of the data visualizer options allowed for a better understanding of the relationship between codes and their usage. The findings were organized in terms of the categories outlined in the conceptual framework, and used to speak back to the theoretical models that guide this study related to student college choice and success.

In terms of the survey data analysis, I utilized frequency counts to determine the program elements most influential in participants' overall experience. At Global Citizen Year, the program structure and curriculum focuses on fellow development and growth across the three learning spheres – entrepreneurial leadership, global and civic engagement, and college readiness, as well as their global perspective. The year-end Impact Evaluation (which was completed by 81 fellows for the 2012 – 2013 year) measured fellows' learning across the spheres, as well as their global perspective through the Global Perspectives Inventory (Bourdieu, 1973; L. A. Braskamp et al., 2010; Duckworth, 2013; Perna & Thomas, 2008) and grit (Duckworth, 2013) through the Grit Scale. Both global perspective and grit were identified by program leadership as externally comparable measures of interest. Gain scores were calculated based on baseline scores, and fellows were asked to identify the three program elements that had the greatest influence within the three learning spheres and global perspective. Participants at Youth International answered an open-ended question asking about the most influential program elements. In both cases, inventory of the most frequently cited program elements were reported. Outward Bound post-program surveys were not utilized in this study.

Limitations

There are several limitations to the data and methods utilized in this study. Primarily, the programs and participants studied are not representative of all gap year individuals and their experiences, and thus cannot be generalized. Secondly, as gap year participation is a self-selected treatment, participants may already be predisposed to such gains or benefits, and without an adequate control group, understanding true effects is

impossible. Third, the first part of this study asks participants to reflect on their reasons for taking a gap year. Because of the time delay from gap year choice to gap year participation, it is possible that their responses mid-program may have been biased, or not an exact representation of what their responses would have been had they been interviewed *during* their gap year choice process. Fourth, and related to the third limitation, while many of the benefits identified by participants were observable at the time of the interview, there was speculation on the part of the participants in terms of thinking about how those benefits would play out in their college and career lives.

Findings

Findings from this study can be organized into two broad categories, aligning with the guiding frameworks. Below, emergent themes from the interview data, related results from post-program surveys, as well as extracted quotations[6] serve to explain the gap year choice process along with gap year experiences and their effects for participants in this study. Analyses confirm that participants' attitudes, behaviors, and forms of capital were significant factors both in influencing the choice to take a gap year as well as in the ways in which participants benefited from their experiences.

Research Question 1: The Gap Year Choice Process

Developing a clear understanding of gap year experiences and their implications for participants begins with an identification of the reasons for which students elect to participate in a gap year. In this section, I use Perna's (2006) conceptual model for student college choice to organize the ways in which students described their choice to take a gap year. While Perna's (2006) model serves as a useful framework for

[6] For the purpose of readability and flow and to limit distraction, I omitted uses of the word "like" when quoting participants.

understanding this decision process, the findings presented here emphasize that particular elements of the model are more and less relevant to gap year decisions. Table 18 shows participants' reported reasons and motivations for taking a gap year organized within the categories presented in Perna's (2006) framework. The way in which participants' decribed these motivations also fell broadly into "push and pull" factors {Mazzarol:2002vq}. In this study, push factors were contextual factors that framed and influenced their decision to postpone college enrollment (and in Perna's (2006) model were represented in all of the contextual layers), while the pull factors were expressed in terms of the expected benefits identified in Perna's (2006) model

Table 18

Participant Reported Reasons For Taking a Gap Year

Reasons for taking a gap year	Category	% of participants referencing
Needed break from school	School and Community Context	71%
Influenced by friend, parent, sibling, or college counselor	Habitus – Cultural and Social Capital	68%
Personal growth	Expected Benefits – Non-monetary	46%
Personal time	Expected Benefits – Non-monetary	43%
Travel	Expected Benefits – Non-monetary	39%
Learn language	Expected Benefits – Non-monetary	36%
Have a new experience	Expected Benefits – Non-monetary	29%
Learn things in a new way	Expected Benefits – Non-monetary	25%
Do service work	Expected Benefits – Non-monetary	14%
Gain job skills or explore career	Expected Benefits – Non-monetary	14%
Signaling effect (Acquire cultural capital)	Expected Benefits – Non-monetary	14%
Not ready for college	Higher Education Context	14%
Meet new people	Expected Benefits – Non-monetary	11%
Internship	Expected Benefits – Non-monetary	4%
Not accepted to college	Higher Education Context	4%

Likely because of the particular programs selected for the study, only one of the subjects indicated no prior or current interest in attending college. Specifically, within the participant sample, 94% were planning to attend college in the fall of 2013; however, all but one participant had previously applied to and deferred from college. Consequently, when asked about their motivations for taking a gap year, participants' responses focused most significantly on their perception of the expected benefits of taking a gap year, which were also influenced by other experiences and people – all factors in Perna's (2006) *habitus* layer.

Push factors: The societal, educational, and personal contexts. The single most prevalently cited reason for taking a gap year was related to the "school and community context" and described as academic "burnout," or students needing a break from school. Seventy-one percent of the participants spoke to this theme, referencing a great deal of stress in high school – largely driven by pressure to gain acceptance into top colleges. Students spoke about the need to work hard, get good grades, take Advanced Placement (AP) courses, and participate in many extracurricular activities, which are all concepts associated with the "millennial generation," or those born from 1982 to the present (Howe & Strauss, 2007). For the majority of the sample, this resulted in simply needing some time to decompress before what they perceived to be a continuation of this type of stress and pressure in college. A smaller proportion of the participants talked about feeling disengaged in high school, and as a result, not feeling ready for college, and wanting to take a gap year to allow themselves time to figure out their next step. . Howe and Strauss (2007) assert that the "millennial generation" is uniquely different from their predecessors as they enter college in terms of seven core traits. Specifically, they argue

that millennials are special, sheltered, confident, team-oriented, conventional, pressured, and achieving (Howe & Strauss, 2007). The latter two characteristics certainly emerge as significant contextual push factors for these millennials to participate in a gap year. The finding highlights that the gap year decision was not only influenced the presence of school-based factors (such as a rigorous preparation experience), but that students' emotional relationship with and perception of these school-based factors was particularly critical.

Also related to the school and community context, students in this sample referenced school personnel, such as counselors, who had suggested and supported them in exploring and organizing a gap year. This aligns with Perna's (2006) assertion that school resources and institutional agents are influential in the decision process. Here, it also seems likely that student attitudes toward and respect for certain school personnel is important in determining from whom to accept guidance.

In addition to school-related influences, participants referenced a variety of personal factors stemming from their demographic background and forms of cultural and social capital that influenced their decision to take a gap year. Parental influence was cited only second to academic burnout – both in support of and as a barrier to participation. Several participants, particularly those whose parents had had travel experiences of their own, stated that their parents had been the ones to suggest their taking a gap year, and in some cases even had taken an active role in the program application and decision process. In these instances it seemed clear that parents saw benefits for their son or daughter in participating in a gap year.

Some participants reported meeting resistance from their parents. Several parents of varying socioeconomic statuses expressed concern regarding the financial aspect of participating in a program, highlighting the socioeconomic boundaries surrounding gap year participation. Additionally, several participants explained their parents' fear around the fact that a gap year would mean a delay in the college process. Specifically, one participant, who was born in eastern Africa and immigrated to the U.S. with her parents as a child, described:

> Because my parents are foreigners, they are really strict about education and like high school, college, get your masters, PhD, they want all of that. And then I am like 'I don't want to go college this year' – so it was pretty hard for them, and they were pretty hesitant about letting me go, but in the end they knew… they had to let me go.

Another participant born to immigrant parents explained that the concept of a gap year was not well known to her family, and described her mother's concern with her derailing from the planned academic track. Participants also reported being influenced by their social networks beyond their parents – specifically by friends and even friends of friends, and friends of siblings, who had taken gap years, wished they had taken a gap year, or were planning to take gap years.

These situations highlight cultural assumptions about postsecondary success and pathways, and overall, the role of family background, cultural capital, and social networks in the decision process. While this study does not include the perspectives of youth who did not take a gap year, learning from students who met resistance from their parents (although not enough to sway the overall decision), is helpful in beginning to understand some of the general barriers to gap year participation.

Finally, other contextual push factors that emerged related to the higher education

context (Perna, 2006), or receiving colleges. In the most direct example, one participant, Rachel had been *required* to take a gap year by her college. An Ivy League school, and one of her top choices, had admitted her off of the waitlist, but to begin the following fall – in other words, her acceptance was contingent upon her taking a gap year. Other students in the sample received support from their future institutions both financially (from a gap year scholarship fund) and in terms of academic credit. As nearly everyone in the sample had deferred from an institution, no one reported meeting any resistance, and in several cases participants indicated that their colleges were very supportive of their opting to take a gap year. Also, several students were in the process of reapplying to more competitive or better fit schools during their gap year – indicating their belief and/or hope that colleges look positively on gap year experiences.

The pull factors: Expected benefits – non-monetary. As a whole, the expected benefits participants hoped to receive were a driving force in electing to take a gap year, although, individuals' impressions of the expected benefits were no doubt closely related to their background and contextual, push factors. Overall, participants spoke of being aware of both short- and long-term benefits of taking a gap year. Broadly, these expected benefits fell into five categories: 1) personal fulfillment/pleasure, 2) personal growth/development; 3) building one's personal, academic or professional resume; 4) career preparation or readiness, 5) human or cultural interactions.

Particularly in contrast to a busy and stressful high school experience, participants discussed simply wanting to have personal time and to take advantage of this period in their lives with "no responsibilities." Participants saw this as a time to be able to do things that they had always wanted to do, such as travel and have new experiences. It was

clear that for these participants, the beginning of college implied returning to the "normal routine of life," taking on responsibilities in terms of complying with social norms such as getting married, accruing debt, and committing to work.

Personal growth was a significant overall goal for participants. Specifically, several participants across all three of the programs indicated that they wanted to take a gap year in order to "mature" and "to gain independence" before beginning college. Participants seemed to crave the experience of living away from home and learning to take care of themselves. Annie shared, "my overall goal for this year – I wanted to gather the tools necessary to be a vehicle of change later in my life."

One of the more interesting benefits or rationale expressed by participants when asked why they decided to take a gap year was the idea of enhancing one's reputation and personal resume. Matt speculated that, "when you say 'I traveled to South America for three months, I lived out of a backpack, I did volunteer projects – in three different countries,'" employers and colleges would look positively on his having taken a gap year. Jamey expressed, "it's cool to be able to, in conversation with someone who says 'I've always wanted to go to Cuzco' [and then I would say] 'oh yeah I went there for three days and it's a pretty cool city, you should definitely see it.' Just be able to have that." Heath (2007) affirms this, stating, "in a period of increased competition and heightened emphasis on the 'economy of experience,' the gap year serves to widen the gap between different groups of students as part of an ongoing process of positional competition" (p. 101), and participants seemed to be aware of this.

Participants also reported a desire to gain practical skills that they believed would serve them in college, career, and life. Learning another language (either a new language

or attempting to become fluent in a language that they had only known in a classroom context) was very important to participants, both as they decided *whether* to take a gap year, and *where* to take a gap year. Some participants spoke directly to wanting to gain other skills such as work experience and the opportunity to explore potential career options. Kate stated that she had always wanted to work as a marine biologist, but wanted to actually experience what working in the field was like before spending four years pursuing it in college.

Finally, an extension of the desire to have new experiences, participants also described being drawn to the opportunity to meet and interact with new and different people during their gap year. Susan explicitly identified wanting to have interactions with both people in her group as well as her homestay. Amanda explained, "I just really wanted to form really meaningful relationships with other people in different places and so I was really coming into this just wanting to invest in other people." Molly recalled, "I had met a woman who went on the habitat global village thing and ended up building houses in Guatemala. And I got to talking to her, and she just seemed so cool to me. Just so much cooler than everyone else I'd ever met. And I was like 'I want to meet cool people. I want to be cool.'" These reports indicate that the idea of broadening one's horizons and expanding one's social network was an expected benefit of gap year participation.

Concerns and perceived costs. Overall, participants' concerns about their gap year year participation and the perceived costs were minimal, which was likely a function of the fact that everyone in the sample had chosen a gap year. However, for most of the

participants in the programs in this study, the monetary cost of the program was significant. As shown in

Table 17, 44% of the participants paid full tuition, 44% paid partial tuition, and 6% paid just $500. Full tuition for Global Citizen Year was $28,500 for an 8-month program, and Youth International charged $11,000 for the 3-month semester. The cost of the 2 ½ - month Outward Bound course was about $10,000. While some participants did not indicate any financial hardship associated with paying tuition, several Global Citizen Year fellows mentioned that the cost was a cause for concern for their parents, but also that the financial aid offered by the organization had made their participation possible.

Other perceived costs of taking a gap year were related to falling behind one's peers academically, and the "fear of missing out" socially (fondly referred to as FOMO). Academically, Jonah said that putting off college was something he really had to think about, and was unsure about what the repercussions might be. Reflecting on her pre-departure thoughts, Rachel explained that, "I was just so worried about losing time and being behind, and that I'd get to college and not know anything," but later laughed, "that was misguided." Later in the interviews when participants were asked to speak about the challenges they were facing during their gap year, many described managing this FOMO in the context social media, where they were constantly made aware of everything their peers were doing in college.

Summary. All participants in the sample saw great benefits to participating in a gap year, both in the short- and long-term, and although not explicitly stated, it is evident that participants saw taking a gap year as an opportunity to build their own capital resources in a variety of ways. Perceptions of these "pull" factors were also significantly influenced by participants' social and cultural capital, as some parents and students were able to see some of the expected benefits in ways that others could not. As well, these

findings confirm that demographics and forms of social and cultural capital largely influenced the "push" factors in the college and gap year choice. However, push factors emerged in the data that were not accounted for in Perna's (2006) model, suggesting the need to expand this understanding of college choice. In particular, these data suggest that students' social and emotional state, with respect to the context layers such as the school context, are quite influential in students' decisions. For example, participants reported both academic burnout and disengagement with their high school experiences, implying that not only was having a rigorous high school experience influential, but their response to the rigorous high school experience was equally as significant. Particular student responses to everything from the larger social and economic contexts to their own demographic characteristics may also serve as important elements in the college and gap year choice process.

Research Question 2: Gap Year Experiences

Each gap year program offers a unique itinerary and program structure. Thus, to a significant extent, participants' experiences are a direct result of the structured program activities. Clearly, many youth may opt to take a gap year without the support of a program, but similarly their choice of activities frames their overall experience.

Table 19 displays the advertised, or intended elements of the three programs in this study.

Table 19

Intended Gap Year Program Experiences

	Global Citizen Year	**Youth International**	**Outward Bound**
Length	1 Year: 7.5 months in Ecuador, 3 weeks in the US	82 days: 3 days in the US + 1 month each in Bolivia, Peru, Ecuador	81 days: 18 days in the US + 63 in Ecuador
Leadership/ Supervision	1 Country Director, 4 Regional Team Leaders	2 Leaders	2 Proctors
Group/Peer Component	46 fellows in Ecuador, 11 or 12 in each of 4 regions	14 participants	12 participants
US Orientation	10-day Fall Training in US (California)	3-day orientation in US (Colorado)	2/3-day orientation in US (Colorado)
In-Country Orientation	5-week In-Country Orientation in Quito	Ongoing, by location	Unknown
Language Training	5-week intensive; ongoing while in country – group classes 2 – 3 times per week	1-week intensive language training	Incidental – "practicing Spanish"
Living/ Sleeping	5-week orientation homestay[7] + 6-month homestay	5 homestays throughout (approx. 1 week each); hostels + other lodging	Camping
Service	6-month "apprenticeship"	Intermittent	Intermittent – Minimal
Travel	Minimal	Frequent	Moderate
Outdoor Adventure	Minimal	Moderate: Hiking, peak attempts	Intense: High altitude climbing
Focal Areas	Global Citizen Behavior, Personal Growth & Leadership, Entrepreneurial Mindset, Global Competence Action	Backpacker traveling	Technical skills acquisition (Leadership, teamwork and wilderness skills)
Other Elements	Summer Fundraising & Community Organizing, Training Blocks, Final Community Projects, Storytelling (blogging)	City and cultural cite exploration, relaxation time	Geology and ecology instruction, cultural education, city and village visits

[7] A homestay is when participants live with local families and become immersed in local community life.

In addition, participants spoke frequently about more incidental or unexpected experiences that seemed to be a direct result of the structured program elements. Table 20 shows the percentage of participants that mentioned particular experiences during their interviews.

Table 20

Participant Reported Experiences Had During a Gap Year

Code	% of participants referencing
Confronting challenge/Leaving comfort zone	89%
Group Experience	68%
Homestay	57%
New Experiences	57%
Language (Courses, Training, Practice)	54%
Connection with people and communities	54%
Interactions with leaders	36%
Learn from others (learn about cultures)	36%
Service Work	29%
Travel	25%
Slower pace, idle time, loneliness	25%
Program-provided training	18%
Work	11%
Internship (Apprenticeship for GCY)	7%
Outdoor adventure	7%
Take care of self	7%
Party	4%
See significant places	4%

Overall, the most common experience reported by participants was confronting challenges feeling and pushed out of their comfort zones. Nammy shared, "You're in a very challenging environment. You are in a foreign environment. You are being challenged every moment of the day – socially, intellectually, or whatever." Eighty-nine percent of all participants interviewed spoke about confronting challenges, which ranged from eating unappealing foods to summiting mountains. Participants described feeling

challenged by the language barrier, loneliness, the climate (altitude, temperature, bugs), general living and bathing situations, homestay family dynamics and lack of privacy, Ecuador's periodic lack of infrastructure such as running water, and inevitably getting sick. Others talked about the fear of missing out on what other friends were doing at home or while in college, and some expressed apprehension around being able to "do enough" or "make a dent" in their communities. Youth International participants talked about the challenges associated with living and traveling in a group of 16 people, such as personal space and group dynamic issues. For participants in both Youth International and Outward Bound where outdoor adventure was part of the program, facing physical challenges in terms of exerting oneself when climbing peaks forced participants out of their comfort zones. Participants also occasionally mentioned challenges in terms of program conflicts – mostly related to feeling constrained by program rules. While confronting challenging and being pushed out of one's comfort zone may not have been an advertised and articulated goal of the programs, it was clear that these incidental experiences were critical elements of gap year experiences.

The second most prevalent theme was making connections and developing relationships within the cohort and with program staff. In particular, the feeling of being brought together by a shared experience and common goal was clearly powerful for individuals as they bonded with trip and cohort-mates. Sofia talked about getting to the start of the program and feeling like, "I had met my people," and Polly expressed how thankful she felt, "to be in a group of people who are so engaged in the world and the community and always talking about the world and the community." Participants also identified forming meaningful relationships with and looking up to program staff.

Homestays served a central and seminal element of the experience for participants in Global Citizen Year and Youth International, Global Citizen Year fellows spent the majority of their overall time in their homestay placements, and although Youth International participants, only spent five weeks of three months in homestays, it was clear these were very influential experiences. Additionally, making a conscious decision to interact with their homestay families, as opposed to reading or sleeping, was something mentioned by several participants. Global Citizen Year fellows indicated that the duration of their homestay was very important to their ability to develop meaningful relationships.

In general, making connections and developing relationships with members of the local communities, largely facilitated by homestays and apprenticeships or service work, was memorable. Participants identified the pleasure of talking about politics (particularly the 2012 U.S. presidential election), cultural differences, and Ecuadorians' experiences of living in the United States, and recognizing that this was a very special and valuable opportunity to be living with and spending time with homestay families. Of his host mother, Matt said, "it also just showed—we had so much in common; me and this 60 year-old Bolivian woman—it was incredible. And it just showed the different cultures are second to similar individuals." Both the homestays and forming relationships with locals frequently involved use and development of language. Outside of homestay experiences, several participants pointed to unexpected, or chance encounters had with strangers on the street. Of a woman he met on a bus ride who shared his passion for classical violin, Jonah stated:

> it was just one of those things you don't get in the U.S. If I had turned my back, if I hadn't sat down, if I hadn't greeted her and asked how she was it would not have

> happened. But now it's--now it's happened and it's quite an amazing kind of connection to have that.

It appeared that many participants were surprised to have found that they had so much in common with individuals from such diverse backgrounds.

Participants also frequently cited broadly, that having new experiences expanded their perspectives and fostered learning from others in new ways. Polly described having conversations she had never been a part of in the past, mostly related to politics and Charlie described being exposed to new political stances through conversations with other fellows. Other common themes addressed by participants were being in new places, doing new things, learning new things, and learning new things in new ways. Jamey shared, "this whole trip has been a trip of firsts for me." In general though, for most participants, daily life in every way, shape, and form was different – and several participants mentioned having "culture shock." Particularly for Global Citizen Year participants, new experiences often led to new emotions that were not easily captured in words. Annie explained, "I'm feeling emotions that I have never—I can't even describe." "It's like simultaneous euphoria and hysteria at the same time," Amanda agreed. Ted also spoke about experiencing a powerful fear of failure in a new way.

Commonly the context of community immersions and homestays, experiencing a new way of life meant adjusting to significantly more idle or unstructured time than participants were used to at home. Life in Ecuador operated at a slower pace and sometimes caused loneliness. This was also exacerbated by not having constant contact with peers. More so with Global Citizen Year than Youth International, participants spent time in isolated homestays and communities, experiencing time to themselves with nothing they "had to do." Several fellows spoke of feeling lonely and uncomfortable, and

particularly due to language and cultural barriers, having a difficultly with going long periods of time without feeling connected to other people. Jessie explained, "we've got a lot of downtime. What does that do to me mentally? What does a whole day of inactivity and just like walking around do to me? … It makes me a little crazy." Annie reflected, laughing, "you should be able to enjoy your own—or at least I believe you should be able to enjoy your own company so for me that was kind of like shit! **[*Laughs*]** But it's also something I'm definitely working on and learning." Participants also commonly discussed engaging in service work, traveling, trainings, working, internships, outdoor adventure, taking care of oneself, partying, and seeing significant places as both intended and incidental experiences.

Summary. While participants discussed their experiences with the structured program activities, it was clear that many incidental or unanticipated experiences played a significant role. When looking back to the reasons that participants chose to take a gap year in comparison to the experiences they described having, many of the most important experiences had been unanticipated. For example, when describing their motivations, no one mentioned experiencing challenge or getting out of comfort zones. However, when describing the experiences they were having, this emerged as the most ubiquitous theme. Similarly, a very small proportion of participants stated that meeting new people had been a reason for their taking a gap year, yet forming relationships with both peers and locals was described as a major activity. Also, when participants talked about forming new relationships with their peers, it seemed as though the strength and bonds of these relationships had developed in response to potentially having a more difficult time

developing deep and meaningful relationships with local Ecuadorians. Although no participants explicitly stated this, no deeper-level relationships with locals were reported.

The trip and program leaders interviewed in this study seemed to be aware that participants engaged simultaneously in structured program activities as well as the incidental, or more informal experiences that appeared to be a known byproduct of the more formal experiences. This was particularly evident when the leaders discussed what participants took away from the experiences, or the ways in which they were impacted. For example, when asked what her participants were getting out of their experiences, a Youth International leader, speaking of some of the outdoor adventure components, reflected, "I think all of them learn a certain amount about their physical capacity—not necessarily how fast they can walk up a hill. But how they can keep going day after day." This quotation illustrates that while the program may have advertised technical mountaineering skills, a deeper learning about oneself was the most memorable aspect of the experience. In the next section, I present the specific ways in which participants saw the effects of their gap year experience, paying particular attention to the precipitating program elements.

Research Questions 3 and 4: Effects of Gap Year Experiences

In order to learn about the effects of the gap year experience from participants, I asked them to describe what they were getting out of their experience. My analysis of the effects suggests they were benefiting from the experience in both expected and unexpected ways. In general, gap year experiences, and certain elements in particular, emerged as opportunities for participants to acquire forms of cultural, human, and social

capital. The procurement of various forms of capital ultimately led to changes in attitudes and behaviors as well as to the development of new skills and knowledge.

In general, when speaking about the effects of their gap year experiences in the interviews, participants identified particular program elements or activities from which these effects or benefits were generated. The most frequently referenced element or activity was confronting challenges, and feeling pushed out of their comfort zones. Following, the group or cohort experience, the homestay experience, new experiences in general, as well as language development and connecting with people and communities were also addressed by over half of the participants.

When disaggregating responses by program, similar patterns emerged, although there were some differences directly related to the program foci and goals. Based both on interview data and survey responses, Global Citizen Year fellows reported that their homestay and apprenticeship experiences as well as their relationships with other fellows and the training blocks played the most significant role in their overall learning and growth. Similarly, based on their survey responses, over half of Youth International participants indicated that their homestay experience was the most influential component of their trip. They also reported that their outdoor adventures, or conquests of, were extremely influential, as were their relationships with other trip mates and the leaders. These findings were also affirmed by the frequency with which they discussed these elements in their interviews.

The two Outward Bound participants, interviewed post-course, indicated that their interactions with local Ecuadorians and their climbing of the mountains Cotopaxi and Cayambe, which were seen as major physical accomplishments, were most influential. It

is interesting to note that the Outward Bound participants spent significantly less time out of the U.S. as compared with those in the other two programs. Additionally, while in country, they spent a significant portion of the time in the wilderness, so overall had much fewer interactions with locals, but still indicated that their experiences with the people of Ecuador were some of the most influential.

The participant reported effects of gap year experiences are displayed in Table 21, along with percentage of participants referencing each theme. Of the three forms of capital, cultural capital was addressed the most (93% of participants reported gaining in this way), followed by human capital (68%) and social capital (54%).

Table 21

Participant Reported Effects of Gap Year Participation

Gap year effect	% of participants referencing	Related program elements
Cultural Capital	93%	Confronting challenge/leaving comfort zone, new experiences, travel, homestays, idle time/slower pace, outdoor adventure
Non-cognitive skills	89%	
Sense of self	68%	
Adaptability	46%	
Confidence	36%	
Gratefulness	36%	
Patience	32%	
Open-mindedness	18%	
Maturity	14%	
Persistence (GRIT)	14%	
Happiness	11%	
Independence (Self-sufficiency)	11%	
Empathy	7%	
Assertiveness	4%	
Humility	4%	
Changed attitudes and beliefs	29%	
Enhanced reputation	18%	
Human Capital	68%	Apprenticeships, language training, new experiences, homestays, outdoor adventure
New understanding and perspective	64%	
Academic focus	54%	
Knowledge	39%	
Learn language	39%	

Practical skills	39%	
New interest	25%	
Leadership drive or ability	18%	
Problem-solving skills	18%	
Self-control	11%	
Job Skills	7%	
Social Capital	54%	Group experience, homestays, apprenticeships, service work
Interpersonal skills	29%	
Relationships (cohort friends)	25%	
Relationships (locals)	14%	

Cultural capital. Bourdieu (1986) describes embodied cultural capital as "long-lasting dispositions of the mind or body" or "the work of acquisition is work on oneself (self-improvement)." By far the most common theme addressed by participants overall when speaking about the effect of their gap year experience was the acquisition of non-cognitive skills that they believed would be beneficial to them in the future (reported by 89% of participants interviewed). In order of their prevalence, participants reported developing a sense of self, adaptability, confidence, graciousness, patience, open-mindedness, maturity, persistence, happiness, independence, empathy, assertiveness and humility; however, many of these themes were intertwined.

Developing a sense of self was the most highly reported non-cognitive effect, and was often described in reference to dealing with challenge and idle time. Polly reflected,

> I have been challenged in ways that have solidified my own convictions about what is important to me, and what my interests and passions are, but also how much I appreciate my family, where I come from, and my core beliefs.

Others described similar experiences of getting to know themselves better – specifically their interests, values, needs, personality, and learning to "accept [themselves]." Developing a better sense of self was frequently related and extended to developing a clearer picture of what to study and pursue once in college – a potentially deeper layer of

the college choice process. This development also led several participants to reapply to different colleges that seemed more in line with their interests and personality. Polly decided to apply to a women's college on the opposite coast from where she had been raised. Bruce realized how much he valued working in nature and how important it would be for him to pursue that in college, and Kate talked about knowing that she wanted to study politics in addition to her planned environmental science, after realizing how politicized environmentalism was. Also, because so much of life in Ecuador focused on learning Spanish, many participants expressed an interest in wanting to continue studying the language once home. When asked in their post-program survey about how their Global Citizen Year experience helped prepare them for college, fellows reported feeling more excited for college, more self-confident and having a much clearer plan for study. In terms of influential program elements, fellows reported that their relationships with other fellows and their homestay experiences were the most influential factor in helping them develop college readiness.

Within this theme, higher levels of self-confidence and self-esteem were frequently addressed. Specifically, participants said that they had become more confident in talking to strangers and using their Spanish, and knowing that they had skills and would be able to take care of themselves. Stories of being assertive also accompanied this, and many self-proclaimed introverts reported feeling like they really had had to come out of their shells and assert themselves in different situations. Participants also directly connected their gains in confidence to being exposed to challenge. One Global Citizen Year participant reported, "The most important thing I learned about myself this year is that I am capable of so much more than I ever realized. So many things terrified

me this year, yet I did them anyway. And now I know I can do anything." This was consonant with sentiments expressed by many other fellows who reported feeling as though they could "move mountains," "change the world," and generally accomplishing whatever they set their minds to. Also, as reported earlier, "becoming more mature" was one of the leading reported motivations for wanting to take a gap year, and several participants reported feeling more mature as a result of the experience, particularly when they thought about interacting with new peers in college.

Also related to maturity, many participants reported changes in their attitudes and behaviors, particularly with respect to "partying" and drinking, and wanting to be more intentional when going to college. For many participants, this sentiment was generated from talking with friends back home who described experiences so different from their own and there was a sense that participants believed they were doing something more important. For example, Claire described a friend at home trying to convince her that she should join a sorority when she returned. To this, she responded "I don't care about sororities right now. I care about when my water is coming back on." Of her friends partying in college, Molly shared, "It's not an effective way to spend your education and your time," and emphasized that she and her gap year peers believed college should be a place to learn, "not a place to party." Claire asserted,

With this experience I can decide what college is going to be – I don't have to be like, 'I'm in college, I am going to drink a lot.' I can say I am going to college I am going to learn stuff! And I actually care about it.

While certainly it may be that these youth were predisposed to choose a healthier lifestyle, their reflections on college life and plans to be more intentional in their own

experiences suggest that this time helped them gain a more mature perspective and awareness of themselves.

The majority of participants also talked about learning to adapt, being flexible, and adjusting in ways they had not thought possible. Many seemed surprised that they had, so easily, been able to make the transition between comfortable lives at home with their parents and what they had been used to for eighteen years, to something completely different. In particular, the concept of knowing that one could live in much simpler conditions and with much less was liberating. As discussed in the previous section, for most, the transition from an overbooked high school schedule to days with nothing on the agenda was very challenging. Global Citizen Year fellows used the term "Ecua-time" to refer to Ecuadorian approach to time. Many expressed their initial and somewhat ongoing, frustration with making plans to meet a boss or co-worker, and then having them arrive hours late or not at all. When asked about what she was learning and gaining from the experience, Julia described, "Learning how to let go of my need for control all the time. It has been really, really challenging, but very good for me." Related, participants reported becoming more patient. Specifically, living in a culture where things often operated on a different time schedule than what participants were used to had forced them, out of survival, to be more patient with others

Learning to adapt also made participants feel like they were more capable of going "with the flow" and less discouraged by setbacks when things did not go according to plan. Annie reported learning to always have a backup plan for what she wanted to accomplish with her apprenticeship. This sense of resiliency was also accompanied by, in some cases, the newfound ability to laugh at oneself and participants seemed to have

come to terms with understanding and managing when they *could* change things and *did* have control, and when they *could not*. Duckworth (2013) asserts that, "grit and self-control are facets of Big Five conscientiousness, but are also conceptualized as dimensions of human character, social and emotional competency, and non-cognitive human capital" (Duckworth, 2003). Though participants did not use the terms "grit" or self-control explicitly, it was clear they were developing persistence and a deeper sense of self-awareness, and were able to see the benefits, or acquired capital, that came as a result. Several described getting beyond a fear of failure in order to connect with communities and achieve their goals. Jason described feeling liberated by having overcome a fear of failure: "I would say sure I've made failures here and there. But that doesn't matter because I'll keep picking myself up and I'll do it again. And I'll fail again and I'll pick myself up once again and I'll try again and I'll keep trying. And I think that's something that is a life lesson that would have taken me a lot longer to learn if I wouldn't have come here." Talar explained, "I've learned to just be kind to myself. And when I say that, I refer to, you know, just try it. Whatever it is, try it. And even if you fail, use that as a learning experience."

Becoming more open-minded and gaining a broader perspective in life was also highlighted as an effect of the gap year experience. Participants believed that their experiences living in another culture had allowed them to understand other ways of and approaches to life, which in turn allowed them to think about their own lives in different ways. They reported being more open to getting to know other people, and more understanding of their situations. Polly expressed that in her challenge to be content in her placement, she realized how different the American mentality of

"MORE MORE MORE and what's the next step?" was from the Ecuadorian mentality of "'we're living in a field and let's just be happy with what's in front of us and find the good that's here,' which I think is SO valuable – in any situation, to be able to find the good, and enjoy life.

Participants also seemed to develop empathy that was connected to a sense of being connected to the larger global community. Molly shared, "I definitely learned people are ultimately the same wherever you go," acknowledging that,

> while things can be so different as far as economically and social status, at heart we're still all the same people and… we all make the same mistakes and have the same struggles… and share the same emotions and the same loves and we all laugh the same way.

This realization, she noted, helped her feel very connected to her community and family. The majority of Global Citizen Year fellows reported that their homestay experience was the most influential to their developing a global perspective. Also, their relationships with other fellows were reported to be important.

Their gap year experience also led to gains in perspective, and made participants feel, in their words, thankful, appreciative, grateful and lucky. In particular, contrasting the lives of those in Ecuador with their own ignited these feelings with respect to what they had, what their parents had provided, and what they had previously taken advantage of. Julia talked about "[winning] the genetic lottery" and others repeatedly emphasized how lucky they felt, both in general, and to have the opportunity to take a gap year and be on their trip. Being away from home and experiencing another culture so intimately made participants realize things they appreciated about their own home and culture. Many expressed gratefulness and appreciation for smaller occurrences in their daily lives, and the realization that the more they could be thankful for little things, the happier they were

overall. Thinking forward to college, Julia said, "[I will be] appreciating so thoroughly everything that will be at my fingertips in a way that I don't think my peers going straight from high school" will be. Some participants also talked about becoming more humble and several about being happier in general. Jason exclaimed, "I'm the happiest I've ever been in my entire life here. I'm stress free. I'm very happy I'm no longer in high school. I'm very happy I got to travel, learn a new language."

In general, gap year participants were very aware of the cultural capital they were gaining simply by being on their gap year. They were excited to have stories to tell upon their return home, and many indicated that they felt as though they were becoming more interesting people. Billy expressed excitement about having had experiences that were unique and would be of interest to others: "You're not going to go home and be like hey; I ate chicken and like no one is going to really care. But if you're like I actually ate a 25-pound rat then that will get people's attention." Jamey looked forward to showing pictures to his family and friends and narrating, "I held an Anaconda! I went on a white water rafting trip! Here is a picture of me riding on the raft. It was incredible! So fun!" He was also excited about having created something (during a service project) that others would see, and that if he ever returned to Ecuador again, he would be able to say, "we built that from top to bottom." Matt anticipated the stories as raising his confidence level: "I think when you get back home you're going to love telling people these stories. That's a big thing. And of course the jealous stares are always fun to have. But really it's just the storytelling both here around campfires, back home, it—I do think it will be a huge boost for me." Others also believed that their gap year had provided them with worldliness that their peers at home were lacking. As Sofia thought forward to what it would be like to

interact with other freshman in college, she said, "[they] definitely do not see the world like we do." Matt said, "I guess you could say I'm more worldly just being down here and seeing all this—seeing all these experiences." Claire affirmed this, articulating, "we have this vision into all the rest of the world in a way that the majority of the world lives." Clearly, participants were aware of how they were differentiating themselves from their peers. When asked about the factors that contributed to their future plans to be globally and civically engaged upon their return, Global Citizen Year fellows reported that their homestays and apprenticeships were most influential.

Gains in non-cognitive skills in general seemed to be a result, most broadly, of confronting challenge. Having to deal with difference, adversity, new environments, living situations, foods, and lifestyle had forced participants to develop the necessary coping skills, such as adaptability, perseverance, and patience. Specifically, idle time – both forced and self-selected – allowed participants to develop a deeper sense of self through reflection and often journaling. Certainly, apprenticeship and service opportunities gave students the opportunity to reflect on study and career choices.

Human Capital. Many of the participant-reported benefits of gap year included acquiring skills of all kinds – the most common of which was Spanish-language skills. For some, it was achieving basic communication abilities, while for others it was near fluency. Not surprisingly, participation in language courses and training, as well as homestay experiences contributed most significantly to language development. Additionally, participants cited experiences of traveling alone or navigating the local culture in which they drew on their newly developed language skills. Homestay experiences and engaging in daily activities within Ecuador gave participants the

opportunity to solidify their skills in ways not available in a traditional, U.S.-based language course.

Second to language was the development of practical, personal, and labor-related skills such as learning to do laundry, time-management, organization, money-management and budgeting, cooking, bartering, how to navigate and get around, and how to be a safe and savvy traveler were all addressed. Practical and personal skills seemed to have developed in response to both being out of the care of their parents (often for the first time) as well as being in a foreign environment. While certainly many of the self-care skills learned as a result of being away from home are similar to those typically learned by first-year college students, many of these skills developed from having to adapt to life in a very different cultural and environmental context. For example, several participants discussed learning to wash their clothes by hand (often in the river) in absence of a washing machine, as well as to safely take care of their own belongings while living and traveling in a developing country. Labor-related skills were typically described as a result of their work on service projects and apprenticeships. Youth International participants cited building, brick-laying, spackling, mixing cement, and using a wheelbarrow. Global Citizen Year apprenticeship also provided ample opportunity for skill acquisition; Molly described learning to give stitches in the medical clinic in which she was working; Rick learned wood-working and how to make chocolate from a chocolate factory in his town, as well as strategies for dealing with local government and small businesses.

Participants also identified the problem-solving skills they had developed through their experiences confronting new and unique problems and challenges, and devising new

and unique solutions. Sofia described, "design thinking," or adaptive, problem-solving, and Rick talked about simply learning to think in different ways. Commonly these skills developed around interacting and working with children.

Both the Global Citizen Year and Outward Bound curricula specifically focused on developing leadership skills, and participants affirmed not only taking on leadership roles during their gap year, but that the skills would be transferable and utilized after their gap year. Chris and Mark gained experience leading within their Outward Bound group, while Global Citizen Year fellows described taking on leadership roles in their apprenticeships and communities. Despite not having a leadership focus, Youth International participants also felt as though they had developed leadership skills and were excited to demonstrate them upon returning home. Outdoor adventure feats in general were identified as fostering leadership skills. Global Citizen Year fellows reported that their apprenticeship, followed by the training blocks, were the most influential program element in helping them to develop entrepreneurial leadership.

Social Capital. Bourdieu (1986) defines social capital as, "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group" (p. 51). Analysis of interview data showed that gains in social capital, were most clearly linked to the group experience as well as the interactions with Ecuadorians through homestays, service work and apprenticeships, and travel. As gap year participants developed relationships with members of their groups(s) as well as Ecuadorian residents, they expanded their social networks and social skills in important ways.

With respect to their peers from the U.S., many participants spoke of the excitement and pleasure of meeting, interacting with, and forming relationships with people from diverse backgrounds. Prior to their gap year, participants described their peer circles and networks primarily containing people originating from their same geographic area and having similar demographic characteristics in terms of socio-economic status, race, religion, and political affiliation. Through their gap year program, participants were able to expand their social network to include people from different geographic areas in the U.S., people of different political beliefs, socio-economic backgrounds, races and religions. BreAnn articulated, "The diversity of ideas that you're exposed to within our group is amazing." Additionally, participants not only believed that their networks were expanding in diversity, but many also emphasized the caliber of people they were connecting with. Jason expressed, "I've said it once, I've said it twice, I'll say it now, I'll say it again. If you could pick a group of kids to run the country, I would say you would pick the 100 fellows in Global Citizen Year." At Global Citizen Year, fellows continually described each other as "smart" – both intellectually as well as "smart as full people" and "aware." Several participants in both Youth International and Global Citizen Year were planning to attend Ivy League and other top tier colleges and universities.

In addition to building relationships with others from the U.S., participants identified the ways in which expanding their networks in Ecuador might benefit them in the future. This was in many ways related to expanding their horizons in general. When describing the ways in which he was benefiting from his experience, Jonah stated,

> I think probably--probably connections-wise and meeting--meeting people and meeting--meeting besides new friends, people who might be able to lead you in a--in a certain path and inspire you in a certain way. And in--I mean in the same vein, it might just inspire you; you know I might decide this Capacocha place has

> a lot of you know a lot of things going on. I've learned a lot in--in a week and I might want to try to focus on something here.

Also, as several participants spoke about wanting to work in international development or abroad, it was easy to see how relationships formed with local Ecuadorians might be leveraged in the future for networking purposes, and to secure references and employment.

Through cultivating all of these relationships, participants developed significant interpersonal skills, another aspect of social capital that they identified as being beneficial to them in the future. Global Citizen Year fellows reflected on the interpersonal skills gained through repeatedly "sharing one's story" with people in their communities who were curious about they were doing. Amanda explained, "I'm just learning to talk to different types of people just out of the blue, people that I don't even know. And that's really cool I think." Billy asserted that as a result of the experience,

> you gain skills like being able to work in a group with all sorts of different personalities… skills that can really be applicable and no matter what field you go to because you're always going to be working with different types of people.

It was clear that participants were becoming more comfortable interacting with people outside of their home networks and understood this would be a useful skill moving forward in life.

Participants in Youth International and Outward Bound, both group-focused programs, described learning to live with other people and developing a sense of self-awareness around the experience. For Rachel, that meant learning to share a room with different people and attempting to understand things from another perspective. Mark talked about coming to terms with his feelings of entitlement and being accustomed to

doing what he wanted, and how that played out in a group setting. The intense group aspect of his trip had prompted this experience of self-realization.

Discussion

Contributions to Existing Frameworks

This study provides evidence that the proposed conceptual model for understanding college choice {Perna:2006ua} and success (Kuh et al., 2006; Perna & Thomas, 2008) are useful for understanding gap year experiences, but that the contribution of different elements of the models are more nuanced. Specifically, in terms of college and gap year choices, the data support that Perna's (2006) proposed contextual layers influence students' reasons for taking a gap year. However, this study provides evidence that the ways in which students engage with each of the contextual layers is particularly important to gap year choices For example, the school and community context supposes that the resources available to students' in a given high school are influential in their college-related choices. Findings from this study indicate that with respect to gap year specific choices, the ways in which students interact with these resources, their beliefs about those resources, and their attitudes and behaviors that develop as a result of the resources are particularly influential. Specifically, the fact that students feeling "burnt out" from rigorous high school experiences was reported as a major driving factor for gap year participation emphasizes the nuanced contributions of elements in Perna's (2006) model that are salient with respect to gap-year specific choices. This study suggests that, students' emotional state, well-being, and attitudes and perceptions with respect to and towards all contextual are particularly important to gap year choices.

Similarly, evidence shows that for participants in this study, gap year experiences contributed to increases in social, cultural and human capital in holistic and complex ways. Certainly, it seems likely that the types of capital acquisition and growth that participants described as a result of their gap year will contribute to their success in college. However, findings suggest that looking only at college success as an outcome of gap year experience is quite limiting and does not capture all of the potential contributions to one's personal development and growth. Participants in this study would, by most standards, have been deemed quite "college ready" prior to their gap year. The majority had been successful in high school and had already applied and been accepted to top-tier colleges. However, it was clear in their decision to take a gap year that these students did not feel ready for college in other respects. They felt as though something was missing, and they had a desire to learn and grow as people, in ways they had not been able to previously. And as a result of their gap year, beyond feeling better prepared for college, participants reported feeling like better, more complete, people in general. Findings from this study indicate that students' pre-college human, social, and cultural capital, as well as their attitudes, behaviors and motivations both inform and are informed by gap year experiences. Additionally, the outcomes of a gap year extend beyond typical measures of "student success." In considering gap year outcomes, the ways in which they might support college success are important, but of equal importance (irrespective of college success) is how they might contribute to personal well-being, maturation and development.

Becker (1993) argues that, "education and training are the most important investments in human capital" (p. 17). At the most basic level, a gap year serves as an

additional year of education and training, but in a ***new and different*** way. It provides participants the opportunity to learn new information and skills through exposure to different environments, living situations, and people, and the opportunity to grow as individuals, ultimately shaping their attitudes and behaviors about and towards college and the rest of their lives. In this sense, a gap year fills a very important role in "emerging adulthood" theory (focusing on people aged 18-25) (Arnett, 2000; Becker, 1993; Bourdieu, 1973; Klugman, 2013; Lareau, 2011; Perna & Thomas, 2008), which is broadly, a significant period in one's life focused on "identity exploration in the areas of love, work, and worldviews" (p. 473). Expanding, Erikson's (1950) theory of the psychosocial moratorium, which posited that adolescence was a time of identity development, Arnett (2000) suggested that the role of emerging adulthood would continue to grow in importance in the U.S. and industrialized societies in general, where the allowance for prolonged periods of time for exploration and freedom are possible. While this is not a critique of Kuh (2006) or Perna and Thomas's (2008) models, this fact underscores the need for a more comprehensive model to account for broader concepts of success and human development that result from gap year participation.

Additional Contributions

This study highlights the complicated and multi-faceted nature of and relationships within the college choice process that include not only the decision of if and when to enroll but also how and where to enroll, and what to study. As this study primarily focused on students' decision of timing, or whether or not to enroll in college immediately or participate in a gap year, participants' decisions of how and where to enroll and what to study were inextricably, although inconsistently linked. While in most

cases, participants had made decisions about how and where to enroll prior to their gap year, as demonstrated by having applied to, been accepted to, and deferred from an institution, several participants' enrollment decisions were influenced by and determined during their gap year. As reported, some students had used their gap year to reapply to better fitting or more selective institutions, as well as to refine their course of study. This emphasizes that a gap year may operate as both an outcome as well as a predictor in the model of college choice.

The data also suggest that gap year participation may be operating as a form of social and cultural reproduction (Becker, 1993; Bourdieu, 1973; Klugman, 2013; Lareau, 2011; Perna & Thomas, 2008), as participants' reasons for taking a gap year were directly influenced by their backgrounds as social and cultural capital (Perna, 2006), and at the same time, gains in capital of various forms were the reported effects of their gap year participation. Economic capital was also an important factor for members of this group, as these programs were somewhat costly, and many families were able to convert economic capital into forms of social and cultural capital for their children through gap year opportunities. Parental involvement in the gap year decision process (for some students) illustrates the role of parents' financial and knowledge-based resources in helping their own children stand out and get ahead. Previous studies have also found that middle-class parents leverage financial resources to provide additional opportunities for their children (Klugman, 2013), and embrace the "concerted cultivation" approach to child-rearing, where children's talents are fostered through deliberate participation in organized activities (Klugman, 2013; Lareau, 2011). While there were subjects in the

study that were from low-income backgrounds, and were still gaining valuable forms of capital, they were certainly a minority in the benefiting sample.

Finally, this study identified several key elements of gap year experiences that appeared to be the most influential in students' learning, development, growth and capital acquisition. Identifying these elements is important in structuring conversations about successful models for delay in general, and specifically identifying beneficial elements of delaying that can be financially accessible to students from differing socio-economic backgrounds (which will be addressed in the next section). In general, several key gap year activities and experiences stand out as having been most instrumental in benefitting participants: confronting challenges and getting outside of one's comfort zone, having a group or cohort experience, forming relationships with people in local communities, having a homestay experience, and participating in service work, internships, and apprenticeships. These experiences allowed students to develop their social networks and interpersonal skills, their human capital, language, practical, personal, and job skills, and and fostered personal growth in non-cognitive skills. Ultimately, these important experiences identified by participants all centered around being immersed in a different and foreign environment, and having new experiences that forced participants to go beyond the familiar and comfortable, and develop appropriate coping skills and strategies to be able to go survive and thrive in these new environments. Ultimately, having a safe place in which to experience new and different environments and be outside of one's comfort zone is the central element of gap year success.

Additional Limitations

As with the effects reported from the propensity score matching analysis in the second paper, which were only relevant to students with the same pre-college characteristics as those receiving treatment, this study identifies benefits of gap year experiences to a particular group of and type of youth. Although this study did contain subjects from varying income backgrounds, there was no analysis of effects based on this factor. Thus, this study does not provide insight into how other types of youth may benefit from gap year experiences.

Implications for Gap Year Delay Practices

This qualitative study provides rich evidence of the ways in which individuals perceive themselves to benefit from gap year experiences, which in turn has immediate relevance in conversations surrounding postsecondary delay. First, this study shows that a postsecondary delay can be viewed as a beneficial experience for some students, which contradicts findings that have reported all postsecondary delay is associated with disadvantaged students and negative college outcomes (Adelman, 2006; Bozick and DeLuca, 2005; Horn et al., 2005). This warrants a clearer understanding of the implications of more nuanced types of postsecondary delay.

Second, related to the first implication as well as additional limitation, there need to be ways of providing lower-income families with economic resources as well as information about the potential benefits of gap year experiences to make this choice more accessible. As in the college choice process (Perna, 2006), gap year participation is largely dependent not only on financial support, but also upon support and knowledge from family members and social networks. Addressing this knowledge gap with respect

to gap year benefits is something that advocates may consider targeting in trying to make gap year experiences more available to a diverse group of students.

Third, this study has identified several key elements of beneficial gap year experiences that may help to guide and arrange similar experiences for students in more low cost settings. Ultimately, having a safe place in which to experience new and different environments, being outside of one's comfort zone were, and forming strong bonds with peers were found to be central to gap year success. Perhaps there are ways to replicate such experiences for transitioning high school to college students within the U.S. or abroad, at a lower cost.

Areas for Further Research

There is a clear need for further research on the benefits of gap year experiences on several levels. Most importantly, the fact that gap year choice was heavily influenced by youths' state of emotional well-being, and that as a result of their gap years, youth experienced significant personal growth and development, suggests that future studies should explore the use of human and adolescent development frameworks in understanding these experiences.

Second, there needs to be a systematic exploration of the implications of gap year experiences for lower-income students. This recommendation is related to the additional limitation described above, and emphasizes that if this type of postsecondary delay is in fact beneficial, but at this time available almost exclusively to students from higher socioeconomic backgrounds, more investigation is necessary. As potential sources of data for this exploration, Global Citizen Year serves a substantive proportion of students eligible for free-and-reduced-priced lunch, and a comparison of the effects experienced

by these participants in comparison to others from higher income backgrounds could be fruitful. Additionally, City Year, another program that offers gap year opportunities has no cost, and actually provides participants with a stipend, and thus could also be a rich resource for exploring the implications of gap year experiences for a more diverse group of students.

Third, this study also draws attention to the fact that colleges and universities have begun to admit students contingent upon their taking a gap year, and many others strongly encourage and support it. These trends warrant further investigation of the motivations of college and universities in making these decisions, as well as the implications of such policies and practices.

Fourth, in terms of research design, an experiment conducted at the postsecondary level, to understand the true effects of gap year experiences on academic and other outcomes is critical. Additionally, a study interviewing students who participated in a gap year, while they are in college and/or graduated from college, would help to explore how participants experienced the role of their gap years in their later life. Finally, as the participants in this study indicated that their gap year experiences benefited them in several ways, there is a need to explore ways in which central elements can be replicated for more students in more financially accessible ways.

CONCLUSION TO THREE PAPER DISSERTATION

The purpose of this study was to investigate variation in the effects of delaying associated with delaying for different reasons. In order to pursue this inquiry, a mixed methods approach was employed drawing from a nationally representative data set and individual interviews. Utilizing data from the BPS:04/09 study, this dissertation described the delay practices of students in the U.S., the characteristics of students who engage in different kinds of delay, and the predictors of delaying for different reasons. Using propensity score matching, the causal effects of delaying for different reasons on enrollment choices and measures of academic performance, educational satisfaction, and civic engagement were estimated. Then, a qualitative study of gap year experiences – a particular type of delay known to be beneficial – was undertaken to probe deeply and identify particular travel-related activities that might contribute to overall positive delay experiences.

This conclusion synthesizes the findings from the three papers of this dissertation. I begin with a summary of the key findings, and the review the studies' limitations and the contributions to the field of education. After suggesting important directions for future research, I conclude with recommendations for policy and practice.

Primary Conclusions

While the three papers in this dissertation investigated separate research questions, they closely support one another in the larger investigation of postsecondary delay practices and related outcomes. The following primary conclusions emerged from the collection of papers.

Delayers Are Different From Immediate Enrollers

The analysis of delayers in comparison to their immediate enrolling counterparts in the BPS:04/09 dataset confirmed that at the national level, a higher proportion of delayers are from minority and low-income backgrounds, are financially independent, have parents who did not complete college, and have lower levels of high school academic preparation and achievement (Horn et al., 2005). This study also confirmed that when compared to immediate enrollers, delayers are more likely to enroll in a public two-year institution than a four-year institution (Niu & Tienda, 2013) and are less likely to complete a bachelor's degree within six years (Bozick & DeLuca, 2005).

In addition to these confirmatory findings, a new contribution of this study is that when using propensity score matching to create a matched sample of delayers and immediate enrollers, delayers have higher first-year and cumulative GPAs compared to immediate enrollers. This finding complicates the understanding of delay effects on academic outcomes broadly as well as the relationship between GPA and degree completion. Although no previous studies have examined GPA as an outcome of delay at the national level, GPA has been used as an indicator of academic success in studies examining the effects of taking a gap year. In contrast to conclusions that delaying is associated with negative academic outcomes, single-institution analyses have found that a gap year delay is associated with higher GPAs (Birch & Miller, 2007; Martin, 2010). Prior to my analysis, I would have theorized that these discrepancies could be explained by benefits resulting from gap-year experiences. However, the fact that when all else is equal, GPAs appear to be higher for students who delay for any reasons is a new and perplexing finding in need of further investigation. It may be that a delay increases

students' focus and drive with respect to academic studies, as evidenced by higher GPAs, but delaying students are enrolling in less-than-four-year institutions and at lower attendance intensities, which may be the driving cause of lower rates of degree completion. The second paper in this dissertation speculates further on the reasons for this.

Not All Types of Delay are Equal

In addition to making comparisons between delayers and immediate enrollers, a primary purpose of this study was to examine differences between students who delayed in different ways. Several findings resulted from this examination of postsecondary delay disaggregated by delay reason and length. The analyses revealed that delaying students are a heterogeneous group, as there is considerable variation with respect to delay practices as well as the student characteristics associated with their reported reasons for and duration of delaying.

Within the group of delayers, several patterns emerged with respect to observed student characteristics. In particular, this study found that students who reported delaying for travel, for reasons I identified as "gap year[8]" related, and for a single year are disproportionately white, from higher income families, and have higher levels of parental education, and higher academic preparation and achievement as compared to other types of delayers. These analyses also revealed that students classified as "gap year" delayers are a unique subgroup, suggesting that some elements of a true gap year delay are conceivably captured in the construct presented in this paper. Of all of the delayer subgroups examined in this study, "gap year" delayers had the largest proportion of white

[8] "Gap year" reasons were classified as delay for one-year for the following reasons: travel only, travel + other, travel + work, travel + work + other, work only, and work + other.

students and students in the highest income and highest admissions test score quartiles, which corresponds with previous descriptions of gap year participants (O'Shea, 2013). However, "gap year" delayers identified in this study were disproportionally male, which conflicts with descriptions from previous studies (Martin, 2010), and had lower levels of family income and measures of academic preparation and achievement as compared to immediate enrollers. These inconsistencies suggest that there are likely critical missing elements in this classification of "gap year" delayers that are difficult to identify.

In addition, different sets of student characteristics also predicted students' choices to delay for different reasons and lengths of time. When controlling for other variables in the models, delaying for one year as compared to two or more years was predicted by income, dependency status, and whether or not the admissions test was taken; delaying for work was predicted by race, income, dependency status, and high school type attended; delaying for travel was predicted only by gender and race; and delaying for "gap year" reasons was predicted by race, income, parents' martial status and dependency status, and admissions test score.

This study also showed that beyond differing student characteristics, the effects of delay vary by the reason for delay. After using propensity score matching to create matched samples among delayers based on their reasons for delaying, analyses revealed differences related to academic performance and civic engagement behavior. Specifically, between matched samples of travel delayers and non-travel delayers, those who traveled experienced overall positive academic effects as compared to those who did not travel. Travel delayers (as compared to non-travel delayers) had higher odds of completing more than a bachelor's degree (as compared to just a bachelor's degree),

higher first-year GPAs when enrolled in "other" institution types, higher cumulative GPAs, higher odds of bachelor's degree completion, lower odds of dropping out, and higher odds of community service participation in 2009. There were no differences in outcomes observed among delaying students based on length of delay, whether or not they worked, or whether or not they delayed for "gap year" reasons. These findings underscore the shortcomings of treating delay as a uniform activity undertaken by a homogenous group of students.

Delaying for Travel is Precipitated by and Leads to Gains in Particular Attitudes, Behaviors, and Forms of Capital

Based on interviews that accessed students' motivations, intentions, and decision-making processes in the qualitative portion of this dissertation, this study found that participating in a particular type of travel delay – a gap year – is influenced primarily by students' societal, educational and personal contexts operating as "push factors", and the expected benefits of participation operating as "pull factors." Forms of social, cultural, and economic capital were driving forces within this choice model, and the majority of the study's subjects came from families bearing capital that is highly valued in the dominant society. This was also observed in the national dataset, where students who delayed for travel and "gap year" reasons were from higher income backgrounds. Travel delayers were also represented by a higher proportion of students whose parents had a bachelor's degree.

Based on the interviews, the feeling of "academic burnout" or needing a break from school was the most common reason cited for wanting to take a gap year, and accompanied rigorous high school academic experiences (something highly valued by the

dominant society). This was also described by Haigler and Nelson (2013) and O'Shea (2013). In the national dataset, "gap year" delayers were represented by a higher proportion of students who scored higher on their admissions test than other types of delayers. This display for higher academic achievement may be associated with higher levels of feeling "burnt out." Many participants also described the influence of friends, parents, and school personnel on their decision to take a gap year, as well as the desire for personal growth, personal time and wanting to learn and experience new things.

With respect to gap year experiences, the third paper found that gap year programs offer participants a variety of experiences – both as a part of the intended or structured program elements and the incidental or unexpected experiences that often emerged as a direct result of the former. Confronting challenges and leaving one's comfort zone was the most commonly referenced experience, closely followed by forming relationships with other gap year participants and locals, as well as experiencing and learning new things. As a result of taking a gap year, participants described believing that they were benefiting in many ways,. Other scholars have suggested that gap year experiences serve as an opportunity for youth to acquire forms of social, cultural, and human capital highly valued in society (Lyons et al., 2012; Simpson, 2005). Participants in the qualitative portion of this study reported developing non-cognitive skills and new perspectives including a new sense of self, adaptability, confidence, and gratefulness, changing attitudes and beliefs, and enhancing one's reputation. Participants attributed these developments to confronting challenges, leaving one's comfort zone, having new experiences, traveling, participating in homestays, having independent and unstructured time, and engaging in outdoor adventure. Participants also described building general

human capital in the way of job-related and personal skills, new knowledge and academic focus. Participants attributed these human capital gains to their apprenticeships, language training, new experiences, homestays, and outdoor adventure experiences. Finally, the development of social capital, or developing meaningful relationships with trip peers as well as local Ecuadorians and interpersonal skills, came through group experiences, homestays, apprenticeships, and service work. These descriptions of capital acquisition may also correspond with the finding that when matched on all pre-college characteristics, travel delayers had a higher proportion of students participating in community service, a proxy for civic engagement, which is also a program goal and measurable outcome for Global Citizen Year alumni.

Limitations

Overall, the greatest limitation to this study is the inability to differentiate between those taking a gap year and those delaying for other reasons within the BPS:04/09 data. The definition of a gap year specifies that the decision to delay is intentional (Jones, 2004; King, 2011; O'Shea, 2011b) and this factor was unobserved within the dataset. While the findings of this study suggest that travel is a beneficial delay activity, and travel is generally central a gap year ("What's in a Gap Year?," 2013), this study is unable to discern the exact population of intentionally delaying gap year participants. As a result, given these data, this study was unable to measure the causal effects of delaying for a gap year at the national level.

Another major limitation of this study, related to the propensity score matching method, is that causal effects were only identified for the group of control students who were the same as treatment students on observable characteristics. Findings indicated that

for students who enrolled immediately and have the same characteristics as delaying students, delaying had a positive effect on GPA but a negative effect on degree completion. However, the effects of delaying for students are who do not look like delaying students are still unknown.

Related, another limitation is the fact that participation in a delay of any kind is a self-selected activity, which prohibits a true experimental design. This leaves open the possibility that the outcomes reported could be the result of the same factors that cause the delay, rather than the delay itself. In attempt to overcome this limitation, this study used propensity score matching (a quasi-experimental design) to estimate causal effects at the national level and participant self-reports to isolate the impact of gap year experiences; however, the self-selected treatment assignment must be recognized.

Additionally, as a secondary analysis, the data is limited to the variables available in the BPS:04/09 dataset. While the baseline data source (NPSAS:04) asked students questions related to their length of and reason for delay, the survey was not designed specifically to investigate questions related to delay choice or motivations for delay. Additionally, because information collected on delay behavior was collected at the same time as the institutional and enrollment characteristic data, it is unclear as to the sequence in which those choices occurred. Specifically, it is impossible to discern if delay was planned or intentional, or whether for a delayer, the decision to enroll was preceded by an initial decision to not enroll. No information with respect to students' attitudes or views towards delay or educational expectations was captured. Because the intentionality of the delay decision is a critical component of a gap year delay, truly identifying the gap year participants in this data set was not possible. Also, this data set does not contain

information on students who never enrolled in postsecondary education, making comparisons of between delayers and non-enrollers impossible. Another crucial limitation is that because of the cross-sectional nature of the data, causality could not be determined. Specifically, it was unclear whether delay caused or was a consequence of the various attitudes and outcomes.

Propensity score matching as a method for estimating causal effects is not without its limitations. Primarily, as the strong ignobility assumption is critical to the model, "Unobserved confounders [are] the Achilles heel of non-experimental studies" (Stuart, 2012, p. 139). The proposed models account for an important set of pre-college variables, but in all likelihood, there are other unobserved variables that may be biasing the results. Specifically, the first and third papers in this dissertation suggest expanding Perna's (2006) conceptual model for student college choice to consider the ways in which students' emotional state, well-being, and attitudes and perceptions with respect to and towards all contextual layers impact the decision to take a gap year or delay. These feeling- and attitude-based factors are not easily measured in general and certainly not available in the BPS:04/09 dataset. Additionally, propensity score matching treats all covariates, whether strongly or weakly associated with the outcome, the same.

Finally, there are several limitations to the data and methods utilized in the third paper. Primarily, the programs and participants studied are not representative of all gap year individuals and their experiences, and thus cannot be generalized. Secondarily, as gap year participation is a self-selected treatment, participants may already be predisposed to such gains or benefits, and without an adequate control group, understanding true effects is impossible. Thirdly, while many of the benefits identified by

participants were observable at the time of the interviews, there was speculation on the part of the participants in terms of thinking about how those benefits would play out in their college and career lives.

Contributions of this Study

The findings from this three-part dissertation make several contributions to the field of education and the understanding of students delaying postsecondary education. First, these papers speak to current frameworks within the field. My findings confirm that models previously used to conceptualized student college choice (Perna, 2006) and student success (Kuh et al., 2006; Perna & Thomas, 2008) are relevant to the choice to delay, but highlight the elements of the models that are particularly relevant to general delay and gap year choices. Specifically, this dissertation brought to light many of the more personal and nuanced elements that both drive decisions to delay as well as shape the outcomes. It provides evidence that students' emotional states, well-being, and attitudes and perceptions with respect to and towards all contextual factors or pre-college experience play a salient role in delay-related decisions. Related, this dissertation suggests examining success outcomes beyond strictly measures of academic performance. Findings from the second paper indicate that delay experiences also have implications for civic engagement in terms of community service participation and voting; the third paper showed that the outcomes of a gap year extend beyond typical measures of "student success," and include aspects of well-being such as maturation and personal development. Overall, these findings imply that "success" measured only in terms of academic performance is limiting, as the effects of delay reach beyond the postsecondary academic context.

The collective findings from the three papers also help to reframe the paradox of delay that motivated this study. The findings described here complicate our understanding of postsecondary delay by offering a new perspective its effects. In the past, postsecondary delay has been associated with negative outcomes (Bozick & DeLuca, 2005; Niu & Tienda, 2013); however, two of the papers here find positive outcomes associated with delay in general, and specific types of delay in particular. After using propensity score matching to identify a matched sample of students who delay and enrolled immediately, this study suggests that delaying leads to higher GPAs in college. Instead of viewing delay as a risk factor for less rigorous enrollment and no degree completion, this study suggests that delay maybe be viewed as positive contributor to college GPA.

This study also contributes to existing literature and this paradox by illustrating the usefulness of disaggregating delay, as delay activities matter. Previous studies found that at the national level, delaying students begin at as a disadvantage in terms of family income and lower levels of high school academic preparation and achievement, and experienced worse academic outcomes as compared to students who enrolled immediately (Bozick & DeLuca, 2005; Horn et al., 2005). Gap year delaying was previously associated with higher income students, and better academic and personal outcomes. One potential explanation for the discrepancies in outcomes could have been that outcomes were solely a function of student characteristics and pre-college experiences, rather than the experiences during a delay. While this study found that students' background characteristics and pre-college experiences are influential in delay-related decisions, the nature of delay activities and experiences are important themselves.

After using propensity score matching to identify a matched sample of those who delayed to travel and delayed but not to travel, this study showed that (for students who share the same characteristics as students who delayed for travel), delaying for travel increases the odds of bachelor's degree completion, any degree completion, and community service participation. The third paper specifically identified why and how travel experiences are beneficial.

Along with findings that travel has positive effects for certain delayers, the first paper also showed that travel delayers tend to be from higher income backgrounds. This suggests that delay is a mechanism of social and cultural reproduction, whereby more advantaged students are the ones benefiting from travel experiences and less advantaged students are the ones experiencing further challenges as a result of delay. This study helped to identify, among delaying students, the characteristics that predict different types of delay which has implications for potential interventions. In particular, students who delayed but not for travel reasons were less likely to complete a bachelor's degree. As students may delay for a host of reasons, encouraging students to include an element of travel may be beneficial. Furthermore, through exploring the impacts of gap years, specific elements of beneficial travel experiences such as leaving one's comfort zone and confronting challenge, were identified and may be replicated in other settings in order to provide more opportunities for all students to have delay experiences that lead to successful outcomes.

Recommendations for Future Research

While this study has enhanced the understanding of postsecondary delay practices by identifying variation among students and outcomes related to delay reason, this study

suggests three main areas for further research. First, this study encourages examining the temporal relationship between the decision to delay and other enrollment decisions. As this study found variation among delayers based on their reason for delaying, there is likely variation between students who made enrollment decisions before and after delaying. Exploring the implications of this difference is critical to understanding the true effects of delay on postsecondary outcomes, the impact of delay experiences on enrollment choices and the advising needs of different types of delayers. Given the data used in this study, the extent to which a delay experience is an intentional choice versus a cause or influence of future enrollment decisions is unknown. Specifically, it is unknown how delay might operate in order to mediate postsecondary education plans (e.g. if a student indicated no plans to attend postsecondary education upon high school graduation, but then after some time changed his or her mind and decided to enroll based on some experience during that delay time).

Despite being a longitudinal research design, no data were collected on the students in this study prior to enrollment in postsecondary education and there is no information about the intentionality of the delay with respect to students' postsecondary education plans. Theory and literature related to gap year practices emphasize that a gap year is an intentional delay and a strategic decision within one's larger educational trajectory (Jones, 2004; King, 2011; O'Shea, 2011b). A longitudinal study examining when and how students choose to delay, the differences between intentional and unintentional delayers, and the processes and implications of these types of delays should be undertaken to further the understanding of delayers as a heterogeneous group, susceptible to a variety of outcomes.

Related to the previous recommendation, an accurate identification of gap year delayers within the national sample should be pursued. This study attempted to locate the population of "gap year" delayers, but ultimately concluded that capturing intentionality in addition to the reasons was essential, and not possible given the data. In general, properly identifying gap year participants within the national sample of delayers is critical to understanding the true effects of gap year participation beyond the individual successes reported by popular media and even peer-reviewed case study research. As teachers, parents and counselors make decisions about how to guide and support students in their college and delay choices, a comprehensive understanding of the effects of delaying for all reasons, and particularly for a gap year, is needed.

There is also need to better understand the relationship between GPA and degree completion in general and for delayers in particular. Discrepancies in the relationship found between GPA and degree completion for delayers and immediate enrollers complicates our conventional understanding of academic success in college. In general, GPA is related to degree completion, but whereas delaying was associated with a decrease in the odds of completing a bachelor's degree, it was associated with an increase in GPA. These discrepancies are likely due to the fact that delayers have lower expectations surrounding degree completion, and are more likely to enroll in less-than-four-year institutions at lower attendance intensities. Still, the connection between higher GPA and less rigorous enrollment patterns and expectations is puzzling. A qualitative study may help to further explain the effects of delay on the larger picture of academic performance should be investigated further.

Moreover, this study recommends, identifying ways to better account for and measures students' emotional state, well-being, and attitudes and perceptions in relationship to their pre-college characteristics and experiences shown to be particularly important to delay choices in the context of overall college choice (Perna, 2006). Of equal importance, considering and measuring outcomes beyond those purely academic, such as well-being, personal success, and development as a human being within the context of student success (Kuh, 2006; Perna and Thomas, 2008) is also important in trying to capture the full contribution of general delay and gap year experiences for students.

Recommendations for Postsecondary Delay Practices

This study offers three major implications for practices related to postsecondary delay and gap year experiences. First, this study suggests that while delay may not be desired or needed for all students, those expressing a need to or interest in delaying may experience important benefits. Specifically, this study showed that for students with characteristics similar to the current group of delaying students, delay in general was associated with higher GPAs. This may be indicative of the fact that for students who fit a particular profile (and are interested in delaying), a delay may be an opportunity to have experiences that ultimately increase academic drive, focus and engagement – something also described by the gap year participants. As a result, this study suggests that, for some students, colleges consider delaying as an enhancement to their pre-college experiences.

The positive findings related to GPA, however, should not overshadow the negative effects related to degree completion. Recent years have seen considerable attention paid to discouraging students from delaying their postsecondary education, and

instead enrolling immediately (Adelman, 2006) in order to address the degree completion issue. It appears that despite increasing students' academic focus or drive as indicated by higher GPAs, delaying students are still enrolling with lower attendance intensities and in less-than-four year institutions more frequently than immediate enrollers.

As a second recommendation, this study suggests supporting delaying students to attend more rigorous institution types. Based on the findings that for a matched sample of delayers and immediate enrollers, delaying has a positive effect of GPA but a negative effect on enrollment choices and degree completion, this study suggest that delaying students may need additional support and direction in order to be realize the benefits of delaying in terms of degree completion. For students who fit a particular profile, delaying may have positive effects on attitudes and behaviors that affect academic performance as measured by GPA, but their ability to complete a degree may be hindered by their enrollment choices. Thus, directing resources to help student who want or need to delay to enter into more rigorous institutions could be an important step in mitigating some of the negative effects of delaying.

In addition, as travel was found to have a positive impact on degree persistence among delayers, this study suggests exploring ways in which travel-related delay experiences can be replicated in diverse settings. Although these data did not capture the nature of students' travel experiences or the proportion of overall delay time spent traveling, it is worthwhile exploring ways that low-cost and/or short-term travel experiences might be facilitated. Particularly for students who need to delay for financial, family, or health-related reasons, additional funding sources could help introduce travel activities into delay experiences, which may help to mitigate some of the overall negative

effects of delaying. As an extension, this study suggests identifying travel delays in particular as a positive pre-college experience and encouraging students interested in delaying to incorporate elements of travel.

Third, this study suggests exploring ways in which delay activities and experiences reported to be beneficial can be replicated in diverse settings. Participants data from the third papers in this series identified that confronting challenge, leaving one's comfort zone, having new experiences, developing relationships, having a group experience, traveling, having unstructured time, and participating in homestays, service work, language trainings, and outdoor adventure were impactful elements of their gap year and travel delays. Engaging all types of delayers in these types of activities is the first step in providing more students with access to beneficial delay experiences, or at least lessening the negative effects of certain types of delay. As an example, a group or cohort experience could be facilitated among delayers in a particular community who may need to remain close to home. Further studies of the nature of gap year group experiences could inform the creation of groups in this setting, identifying critical elements to be replicated. Delayers could reflect on their collective experiences and form lasting bonds similar to those experienced by gap year participants. All types of delayers could also interact with and gain exposure to new and different people and places while remaining close to home. The human and ecological diversity in the U.S. is vast, and could be easily taken advantaged of within cities or regions to allow participants greater access to new experiences and leaving their own comfort zones.

This dissertation concludes that not all types of delay are equal, and not all delay is negative. With nearly 20% of first-time-beginners having delayed before entering postsecondary education, this is clearly a topic worth understanding with greater complexity. For the matched sample of delayers and immediate enrollers, delaying had a positive effect on GPA, which may be a proxy for increased academic focus and engagement. Despite findings that delay is associated with negative outcomes related to degree completion, the impact on GPA should not be ignored. Additionally, for a matched sample of delayers, those who delayed for travel experienced better postsecondary outcomes than those who delayed but not for travel, In support of this finding, the travel delayers interviewed as part of this study affirmed that travel serves as an opportunity to gain additional pre-college experiences not typically available in traditional high school settings, primarily stemming from being in new and foreign environments and interacting with people different from those in their typical social circles. This study concludes that delaying is not a uniformly negative phenomena. To this end, students interested in delaying would benefit from support in making their delay decision, taking into account the overall findings of this paper.

Appendix A

Description of Variables

Label	Var. Name	Description
Delay Variables		
Delayed enrollment into PSE: Number of years 2003-04	delayenr	Indicates the number of years between the year of the respondent's high school graduation and their first year enrolled in postsecondary education (2003-04).
Delayed Enrollment	delayed	Derived. No delay = 0, Delayed any amount of time = 1
Delayed: 1-Year	delaytime	Derived: No delay = 0, Delayed 1 year = 1, Delayed 2+ years = 2
Delayed: Worked	DEHS04A	No Delay = -3, No = 0, Yes = 1
Delayed: Traveled	DEHS04E	No Delay = -3, No = 0, Yes = 1
Delayed: "Gap Year"	oneyrgyreas	No Delay = -3, No = 0, Yes = 1
Background Demographics Variables		
Gender	gender	Categorical. Male = 1, Female = 2
Race/Ethnicity	raceC	White = 1, Black or African American = 2, Hispanic or Latino = 3, Asian = 4, All other = 5
Income quartile (Parents and independent)	INCGRP4	Indicates the respondent's income group in 2004. Categories approximate separate quartile values for the parents of dependent students and the income of the respondent (and spouse) of independent students in the sample. Derived from: depend and cincome.
Parents born in the US	parborn	Indicates whether the respondent's parent(s) was born in the United States. Both parents were born in the US = 1, One parent was born in the US = 2, Both parents were not born in the US = 3
Parents' marital status	twopars	Indicates the dependent student's parent's marital status during the 2003-2004 academic year. Derived from Parent's Marital Status (pmarital). Single, Divorced/Separated, Widowed = 0, Married/remarried = 1, Student is Independent = 2
Parents have a bachelor's degree	parbach	Indicates whether the respondent had a parent with a bachelor's degree. Derived from Parents' highest level of education (pareduc), which indicates the highest level of education of either parent of the respondent during the 2003-2004 academic year. Neither parent holds a bachelor's degree = 0, At least one parent holds a bachelor's degree = 1, Parent's education status is unknown = 2

Label	Var. Name	Description
Academic Preparation and Achievement Variables		
High school type attended	hstype	Indicates the type of high school attended. Public = 1, Private = 2.
Highest level of high school mathematics	hcmath	Indicates the highest level of math the respondent completed or planned to take, according to self-report on standardized test questionnaire and the student interview. None of these = 0, Algebra 2 = 1, Trigonometry/Algebra II = 2, Pre-calculus = 3, Calculus = 4
High school grade point average (GPA)	hcgparep4	Indicates the high school grade point average on the standardized test date, according to self-report on test questionnaire. Less than 3.0 = 1, 3.0-3.4 (B to A-) = 2, 3.5-4.0 (A- to A) = 3
Admissions test score (ACT or SAT) quartiles[9]	testquart	Admissions test quartile. Derived: Did not take the SAT or ACT = 0, Less than 850 = 1, 860 - 990 = 2, 1000 - 1130 = 3, 1140 - 1600 = 4.
Enrollment Choice and Expectation Variables		
Attendance intensity 2003-04	attnptrn	Indicates the respocutndent's attendance intensity at all institutions attended in the 2003-2004 academic year. Exclusively full-time = 1, Exclusively part-time = 2, Mixed full-time and part-time = 3.
First institution sector and control 2003-04	fsector2	Indicates the sector and control of first institution the respondent attended during the 2003-2004 academic year. Public 4-year = 1, Private not-for-profit 4-year = 2, Public 2-year = 3, Other = 4.
Highest degree ever expected 2003-04	highlvex3	Indicates the highest level of education that the respondent ever expected to complete. Derived from highlvex. Less than a bachelor's degree = 1, Bachelor's degree = 2, More than a bachelor's degree = 3

[9] Because 14% of the analytic sample did not take an admissions test, admissions test score quartiles along with a separate category for those who did not take test were utilized so as to not lose cases due to missing data. Because the data were not missing at random (MAR), imputation was not an acceptable solution.

Label	Var. Name	Description
Postsecondary Outcome Variables		
Academic		
Grade point average 2003-2004	gpa	Indicates the respondent's cumulative grade point average (GPA) for the 2003-2004 academic year.
Overall grade point average (GPA), for all applicable courses, across all institutions attended	gpa09	Indicates overall grade point average (GPA), for all applicable courses, across all institutions attended. (Variable source: BPS:09 FS Transcripts) (qegpaall)
Attained a bachelor's degree by 2009	gradbach	Indicates whether the respondent attained a bachelor's degree by 2009. Derived from PRLVL6Y - Attainment or level of last institution enrolled through 2009. No = 0, Yes = 1.
Attained any degree or certificate by 2009	degreecomp	Indicates whether the respondent attained any degree or certificate by 2009. Derived from PRLVL6Y - Attainment or level of last institution enrolled through 2009. No = 0, Yes = 1.
Dropped out, no degree	dropout	Indicates whether the respondent had "No Degree, Not Enrolled" as of 2009. Derived from PRLVL6Y - Attainment or level of last institution enrolled through 2009. No = 0, Yes = 1.
Satisfaction		
Satisfaction with quality of undergraduate education	SATUG09	Indicates whether the respondent was satisfied with the quality of undergraduate education received. No = 0, Yes = 1
Satisfaction with choice of major or course of study	SATMAJ09	Indicates whether the respondent is satisfied with choice of undergraduate major or course of study. No = 0, Yes = 1
Civic Participation		
Volunteer 2004: Any in last 12 months	comserv	Indicates whether the respondent performed community service or volunteer work during the 2003-2004 academic year. No = 0, Yes = 1
Volunteer 2009: Any in last 12 months	COMSRV09	The respondent had performed community service or volunteer work in the last 12 months. No = 0, Yes = 1
Vote 2009: Ever voted	VOTEVE09	Indicates whether the respondent ever voted in any national, state, or local election. No = 0, Yes = 1

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Appendix B

Proportion of Cases with Missing Data

	Unweighted N Missing or Skipped	% Missing or Skipped
Delay Variables		
Number of years delayed	0	0%
Delayed Enrollment	0	0%
Delayed: 1-Year	0	0%
Delayed: Worked	0	0%
Delayed: Traveled	0	0%
Delayed: "Gap Year"	0	0%
Background Demographics Variables		
Gender	0	0%
Race/Ethnicity	0	0%
Income quartile (parents' and independents')	0	0%
Parents born in the US	0	0%
Parents' marital status	0	0%
Parents have a bachelor's degree	180	1%
Academic Preparation and Achievement Variables		
High school type attended	0	0%
Highest level of high school mathematics	0	0%
High school grade point average (GPA)	0	0%
Admissions test score (ACT or SAT) Quartiles	1,780	14%
Enrollment and Expectation Variables		
Attendance intensity 2003-04	0	0%
First institution sector and control 2003-04	0	0%
Highest degree ever expected 2003-04	0	0%
Postsecondary Outcome Variables		
First-year GPA	0	0%
Overall grade point average (GPA)	1,130	9%
Attained a bachelor's degree by 2009	0	0%
Attained any degree or certificate by 2009	0	0%
Dropped out, no degree	0	0%
Satisfaction with quality of undergraduate edu	0	0%
Satisfaction with choice of major or course	0	0%
Volunteer 2004: Any in last 12 months	0	0%
Volunteer 2009: Any in last 12 months	0	0%
Vote 2009: Ever voted	250	2%
Unweighted N	12,990	
Weighted N	2,721,215	

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).
Notes: (a) Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation.

Appendix C

Balance on All Covariates for Delayers and Non Delayers in Pre-College Characteristics

Variable	Delayers	Immediate Enrollers	%bias	t	p>t
gender	0.413	0.428	-3.1	-0.9	0.369
racex2	0.188	0.175	3.7	0.98	0.325
racex3	0.167	0.181	-3.8	-1.02	0.308
racex4	0.032	0.030	0.8	0.25	0.803
racex5	0.054	0.060	-2.6	-0.73	0.466
INCGRP4x2	0.249	0.237	2.8	0.83	0.404
INCGRP4x3	0.151	0.146	1.1	0.36	0.716
INCGRP4x4	0.109	0.105	1.3	0.46	0.645
parbornx2	0.063	0.064	-0.3	-0.08	0.935
parbornx3	0.153	0.158	-1.6	-0.46	0.646
twoparsx2	0.418	0.421	-0.5	-0.14	0.885
twoparsx3	0.320	0.310	2.8	0.62	0.536
parbachx2	0.280	0.282	-0.4	-0.13	0.898
parbachx3	0.029	0.034	-3.7	-0.89	0.375
hstype	1.072	1.072	0.2	0.05	0.958
hcmathx2	0.404	0.407	-0.6	-0.15	0.877
hcmathx3	0.159	0.158	0.3	0.09	0.924
hcmathx4	0.117	0.110	1.6	0.56	0.577
hcmathx5	0.066	0.059	1.8	0.75	0.453
hcgparepCx2	0.406	0.408	-0.5	-0.14	0.888
hcgparepCx3	0.504	0.500	0.9	0.24	0.813
testquartx2	0.141	0.145	-0.9	-0.3	0.768
testquartx3	0.102	0.098	1.2	0.41	0.682
testquartx4	0.059	0.054	1.4	0.61	0.540
testquartx5	0.391	0.387	0.9	0.21	0.834
N	12,990				

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Balance on All Covariates for Delayers and Non Delayers in Pre-College and Enrollment Characteristics

Variable	Delayers	Immediate Enrollers	% Bias	t	p>t
gender	0.413	0.431	-3.7	-1.09	0.277
racex2	0.188	0.173	4.3	1.14	0.253
racex3	0.168	0.190	-6.2	-1.63	0.104
racex4	0.032	0.031	0.4	0.11	0.910
racex5	0.054	0.055	-0.4	-0.11	0.914
INCGRP4x2	0.250	0.233	3.9	1.13	0.257
INCGRP4x3	0.150	0.150	0.1	0.05	0.963
INCGRP4x4	0.110	0.106	0.9	0.34	0.735
parbornx2	0.063	0.062	0.4	0.12	0.902
parbornx3	0.154	0.157	-0.7	-0.21	0.837
twoparsx2	0.420	0.427	-1.4	-0.4	0.688
twoparsx3	0.316	0.304	3.6	0.78	0.435
parbachx2	0.281	0.278	0.6	0.17	0.863
parbachx3	0.030	0.032	-1.5	-0.36	0.717
hstype	1.073	1.071	0.6	0.21	0.836
hcmathx2	0.404	0.400	0.9	0.26	0.797
hcmathx3	0.160	0.164	-1.1	-0.32	0.752
hcmathx4	0.117	0.112	1.3	0.44	0.659
hcmathx5	0.065	0.059	2	0.82	0.415
hcgparepCx2	0.404	0.410	-1.3	-0.36	0.721
hcgparepCx3	0.506	0.502	0.9	0.24	0.809
testquartx2	0.142	0.144	-0.5	-0.16	0.872
testquartx3	0.102	0.101	0.5	0.16	0.874
testquartx4	0.059	0.051	2.2	0.97	0.331
testquartx5	0.389	0.390	-0.2	-0.05	0.963
attnptrnx2	0.251	0.248	0.9	0.21	0.833
attnptrnx3	0.105	0.114	-3.2	-0.89	0.375
fsector2x2	0.079	0.069	2.6	1.07	0.285
fsector2x3	0.502	0.530	-5.9	-1.61	0.107
fsector2x4	0.297	0.285	3.3	0.79	0.428
highlvex3x2	0.361	0.365	-0.7	-0.19	0.847
highlvex3x3	0.425	0.404	4.4	1.26	0.207
N		12,980			

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Appendix D

Comparison of Estimates of the Effect of Delay on Graduating with a Bachelor's Degree Using the Caliper Radius (.01) and Nearest Neighbor (3) Matching Methods

		Attained a Bachelor's Degree	
		Caliper Radius (.01)	Nearest Neighbor (3)
Reference	**Comparison**	OR	OR
No Delay	Delayed: All Reasons	0.42***	0.44***
No Delay	Delayed: 1 Year	0.40***	0.44***
Delayed: 2+ Years	Delayed: 1 Year	0.97	1.01
No Delay	Delayed: 2+ Years	0.42***	0.40***
No Delay	Delayed: Work	0.40***	0.39***
Delayed: No Work	Delayed: Work	0.87	1.01
No Delay	Delayed: No Work	0.47***	0.55**
No Delay	Delayed: Travel	0.47***	0.52***
Delayed: No Travel	Delayed: Travel	1.34†	1.42†
No Delay	Delayed: No Travel	0.38***	0.37***
No Delay	Delayed: "Gap Year"	0.38***	0.38***
Delayed: Non-"GY"	Delayed: "Gap Year"	1.04	1.05
No Delay	Delayed: Non-"GY"	0.44***	0.44***

Appendix E

Relationships Between Covariates (Pre-College Characteristics) and Delaying

Pre-College Characteristics	Coef.	Std. Err.	Odds Ratio	
Gender *(Female)*				
Male	-0.069	0.081	0.93	
Race/ethnicity *(White)*				
Black or African American	0.723	0.119	2.06	***
Hispanic or Latino	0.450	0.110	1.57	***
Asian	-0.324	0.237	0.72	
All other	0.373	0.193	1.45	
Income group 2004 *(Low)*				
Low Middle	-0.734	0.098	0.48	***
High Middle	-1.257	0.124	0.28	***
High	-1.507	0.125	0.22	***
Parents Born in US *(Both)*				
One parent born in the US	0.190	0.183	1.21	
Both parents not born in the US	0.138	0.121	1.15	
Parents' marital status *(Single, divorced, separated, widowed or deceased)*				
Married/remarried	-0.353	0.094	0.70	***
N/A - student is independent	2.322	0.148	10.20	***
Parents' Have a Bachelor's Degree *(No)*				
Yes	-0.686	0.094	0.50	***
Unsure	0.469	0.243	1.60	
High school type attended *(Public)*				
Private	-0.608	0.147	0.54	***
Highest level of high school mathematics (*None of these)*				
Algebra 2	-0.495	0.095	0.61	***
Trigonometry/Algebra II	-0.960	0.130	0.38	***
Pre-calculus	-1.514	0.156	0.22	***
Calculus	-2.080	0.161	0.12	***
High school GPA *(Less than 3.0)*				
Less than 3.0				
3.0-3.4	-0.637	0.089	0.53	***
3.5-4.0	-1.263	0.125	0.28	***
Admissions test scores (ACT or SAT) (*Lowest Quartile (less than 850)*				
Did not take ACT or SAT	0.998	0.117	2.71	***
Low Middle (860-990)	-0.560	0.134	0.57	***
High Middle (1000-1130)	-0.871	0.147	0.42	***
Highest Quartile (1140-1600)	-1.545	0.189	0.21	***
Weighted N		2,721,215		

Source: U.S. Department of Education, National Center for Education Statistics, 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Notes: Data are weighted using the WTB000 analysis weight, and the WTB001-WTB200 replicate weights with variance estimation.

Results of logistic regressions for weighted sample, *p < .05**, p < .01, ***p < .001

Appendix F

Interview Protocols – IRB Approved November 7, 2012

Effects of Gap Year Experiences

1 – Program Staff Interview Protocol

Prior to this conversation, I emailed you my research information sheet, outlining the purpose of this research in general and this interview, and answering other relevant questions. I want to start by asking you if you have any questions about my research, or the information provided in the information sheet?

In this interview, I am going to ask you questions drawing on your knowledge and expertise as a gap year program provider. This interview should take approximately 30-60 minutes, depending on the length of your responses. You are free to skip over any question that you do not want to answer.

Basics (likely known)

1. How long has your program been running?
2. How many students typically cycle through per year?
3. Which destinations does your program visit?

General/Goals

4. I want to start by asking you to describe the ***goals*** of your particular program (mission statement, etc.)
5. What are some of the reasons that you think high school students take a gap year (both in general, and your specific program)?
    a. Do the students who come to you/apply need support/coaxing to take the final leap, or are they already almost there?
6. What do you see as the general benefits of taking a gap year as opposed to entering college directly?
7. What short-term outcomes do you hope to see for participants directly after finishing your program?
8. What long-term impacts do you hope your program has on participants (in college, career, etc)?
9. What evidence do you currently see of these outcomes and impacts?
10. What, if any, are challenges that gap year participants face as a result of taking a gap year?

Program Structure

11. So your program travels to/has bases in particular locations: (list)
    a. Why/how were these locations chosen?
    b. How do you feel like these locations specifically contribute to the program's goals, and their overall outcomes and impacts?
12. What are the activities that are a part of your program structure?

Activities/Experiences	In the U.S.	Abroad
Work for pay		
Fundraise		
Orientation/introductory activities/workshops		
Tourism activities		
Service work		
Adventure activities		
Language courses or training		
Cultural training or courses		
Homestay		
Academic classes for college credit		
Group travel		
Independent travel (traveling without a program leader)		
Activism		
Exploring spirituality		
Meditating or doing yoga		
Formal Reflection		
Journaling		
Keeping friends and family up-to-date using social media		
Partying		
Managing own budget		
Other:		

13. How are each of these activities or elements meant to impact the experiences, learning, growth, and development of your participants?

Feedback:

14. Is there anything else that you think I should know or should have asked you?
15. To finish, I would appreciate your feedback on this interview. Were all of the questions clear? The flow okay? Etc.

2 – Program Participant Interview Protocol

Prior to this conversation, I emailed you my research information sheet, outlining the purpose of this research in general and this interview, and answering other relevant questions. I want to start by asking you if you have any questions about my research, or the information provided in the information sheet?

In this interview, I am going to ask you questions drawing on your experience as a gap year participant. This interview should take approximately 30-60 minutes, depending on the length of your responses. I have a copy of your survey right here, and so I will be referencing some of your answers and asking you to explain some things further. You are free to skip over any question that you do not want to answer.

1. What led you to take a gap year?
    a. Parents, friends, idea?
    b. Did your other friends take one?
2. Had you traveled before this trip?
3. What is your plan for the whole year? What did you do over the summer? What are you doing next?
    a. How did you decide what to do?
4. What do you plan to do afterwards?
    a. College?
        i. Did you defer?
        ii. What do you plan to study?
5. When you planned/thought about this year, what were you personally hoping to get out of it?
6. How do you define a global citizen?
7. What do you think are/how would you describe the benefits of taking a gap year?
8. What have been some of the challenges that you have faced?
    a. How did you get through those challenges?
9. Can you think back to challenges in high school? How did you deal with those? Is there a difference?
    a. Comfortably asking for help?
10. What skills or knowledge do you think you have gained so far?
11. Anything that you learned about yourself that you didn't know?
12. Anything you learned about Ecuador or the world that you didn't know?
13. How do you think you might be different when you get home?
14. What are you expecting will be short term effects or impacts of your gap year on your life (in college)?

15. What are you expecting will be longer term effects or impacts of this?
16. What has been the most influential experience you've had so far?
    a. Which elements of the program stand out/were most influential?
        i. Why?
17. How is traveling with the group?
18. What role do your leaders play/fulfill for you?
19. What is the role of social media/staying in touch with people back home?
20. What advice would you give to a HS student considering taking a gap year?
21. Anything else?

REFERENCES

Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through College*. Washington, D.C.: U.S. Department of Education.

Allison, P. D. (2009). Missing data. In R. E. Millsap & A. Maydeu-Olivares (Eds.), *The SAGE Handbook of Quantitative Methods in Psychology* (pp. 72–89). Thousand Oaks: Sage Publications.

Avery, C., & Levin, J. (2010). Early Admissions at Selective Colleges. *The American Economic Review*, *100*(5), 2125–2156. doi:10.2307/41038757?ref=search-gateway:f549cd91fec7a07800434211d142efdf

Baum, S., Ma, J., & Payea, K. (2010). *Education pays 2010: The benefits of higher education for individuals and society* (pp. 1–56). CollegeBoard Advocacy & Policy Center.

Becker, G. S. (1993). *Human Capital*. University of Chicago Press.

Birch, E. R., & Miller, P. W. (2007). The characteristics of "gap-year" students and their tertiary academic outcomes. *Economic Record*, *83*(262), 329–344.

Bourdieu, P. (1973). Cultural reproduction and social reproduction. *In Knowledge, Education, and Cultural Change (1973)*.

Bourdieu, P. (1986). Forms of capital. In J. E. Richardson (Ed.), R. Nice (Trans.), *Handbook of Theory of Research for the Sociology of Education* (pp. 241–258). Greenwood Press.

Bozick, R., & DeLuca, S. (2005). Better late than never? Delayed enrollment in the high school to college transition. *Social Forces*, *84*(1), 531–554.

Bridge Year Program. (n.d.). Bridge Year Program. *Princeton.Edu*. Retrieved March 17, 2013, from http://www.princeton.edu/bridgeyear/

Bull, H. (2006). The possibilities of the gap year. *The Chronicle of Higher Education*, 1–5.

Bull, H. (2011). Navigating a gap year, 1–4.

Cabrera, A. F., & La Nasa, S. M. (2001). On the path to college: Three critical tasks facing America's disadvantaged. *Research in Higher Education*, *42*(2), 119–149.

Caliendo, M., & Kopeinig, S. (2005). Some practical guidance for the implementation of propensity score matching. *IZA Discussion Paper No. 1588*, 1–33.

Carroll, C. D. (1989). *College persistence and degree attainment for 1980 high school graduates*. National Center for Education Statistics, US Department of Education.

Chen, C. C., & Petrick, J. F. (2013). Health and wellness benefits of travel experiences: A

literature review. *Journal of Travel Research*.

Clagett, R. (2012, September 26). Regressions on GPA, Classes of 2011-14.

Coetzee, M., & Bester, S. (2009). The possible value of a gap year: A case study. *South African Journal of Higher Education*, *23*(3), 608–623.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, S95–S120.

colleges.usnews.rankingsandreviews.com. (n.d.). *colleges.usnews.rankingsandreviews.com*. Retrieved February 25, 2014, from http://colleges.usnews.rankingsandreviews.com

Cominole, M., Siegel, P., Dudley, K., Roe, D., Gilligan, T., & Griffith, J. (2006). 2004 National postsecondary student aid study (NPSAS:04) full-scale methodology report. *National Center for Education Statistics*, 1–628.

Conley, D. T. (2010). *College and career ready: Helping all students succeed beyond high school*. John Wiley & Sons.

Domingue, B. W., & Briggs, D. C. (2009). Using linear regression and propensity score matching to estimate the effect of coaching on the SAT. *Multiple Linear Regression Viewpoints*, *35*(1), 12–29.

Durko, A. M., & Petrick, J. F. (2013). Family and relationship benefits of travel experiences: A literature review. *Journal of Travel Research*, *52*(6), 720–730. doi:10.1177/0047287513496478

Education, U. S. D. O. (2010, March 23). Pupil/teacher ratio of private schools, by school level and selected characteristics: United States, 2009–10. *nces.ed.gov*.

Education, U. S. D. O. (2012, March 23). Public elementary and secondary pupil/teacher ratios, by selected school characteristics: Fall 1990 through fall 2010. *nces.ed.gov*. National Center for Education Statistics, Common Core of Data (CCD).

Engberg, M. E., & Wolniak, G. C. (2009). Examining the effects of high school contexts on postsecondary enrollment. *Research in Higher Education*, *51*(2), 132–153. doi:10.1007/s11162-009-9150-y

Goldrick-Rab, S. (2010). Challenges and opportunities for improving community college student success. *Review of Educational Research*, *80*(3), 437–469.

Goldrick-Rab, S., & Han, S. W. (2011). Accounting for socioeconomic differences in delaying the transition to college. *The Review of Higher Education*, *34*(3), 423–445.

Goodlad, J. I., Klein, M. F., & Tye, K. A. (1979). The domains of curriculum and their study

. *Curriculum Inquiry: the Study of Curriculum Practice*, 43–76.

Haigler, K. (2012, September 21). Gap Year Survey Summary.

Haigler, K., & Nelson, R. (2005). *The gap year advantage*. Griffin.

Haigler, K., & Nelson, R. (2013). *Gap Year, American Style: Journeys Toward Learning, Serving, and Self-Discovery*.

Hearn, J. C. (1992). Emerging variations in postsecondary attendance patterns: An investigation of part-time, delayed, and nondegree enrollment. *Research in Higher Education*, *33*(6), 657–687.

Heath, S. (2007). Widening the gap: pre□university gap years and the "economy of experience." *British Journal of Sociology of Education*, *28*(1), 89–103.

Holland, P. W. (1986). Statistics and causal inference. *Journal of the American Statistical Association*, *81*(396), 945–960.

Horn, L., Forrest-Cataldi, E., & Sikora, A. (2005). *Waiting to attend college : undergraduates who delay their postsecondary enrollment* (No. 2005-152). Washington, DC.: National Center for Education Statistics, US Department of Education.

Hoxby, C. M., Avery, C., National Bureau of Economic Research. (2012). *The Missing "One-Offs."*

Jones, A. (2004). *Review of gap year provision* (No. RR555) (p. 94). Department for Education and Skills.

King, A. (2011). Minding the gap? Young people's accounts of taking a Gap Year as a form of identity work in higher education. *Journal of Youth Studies*, *14*(3), 341–357.

Knight, E. (2014, March 20). Universities in support of gap years. *Americangap.org*. Retrieved March 7, 2014, from http://americangap.org/fav-colleges.php

Kuh, G., Kinzie, J., & Buckely, J. (2006). What matters to student success: A review of the literature, 1–156.

Lareau, A. (2011). *Unequal childhoods*. Univ of California Press.

Lyons, K., Hanley, J., Wearing, S., & Neil, J. (2012). Gap year volunteer tourism: Myths of Global Citizenship? *Annals of Tourism Research*, *39*(1), 361–378.

Manski, C. F., & Wise, D. (1983). *College choice in America*. Harvard University Press.

Martin, A. J. (2010). Should students have a gap year? Motivation and performance factors relevant to time out after completing school. *Journal of Educational Psychology*, *102*(3), 561–576.

Middlebury College. (n.d.). Middlebury College. *Forbes.com*. Retrieved February 25, 2014, from http://www.forbes.com/colleges/middlebury-college/

Niu, S., & Tienda, M. (2013). Delayed enrollment and college plans: Is there a postponement penalty. *The Journal of Higher Education*, *84*(1), 1–27.

O'Shea, J. (2011a). Delaying the Academy: A Gap Year Education. *Dissertation*.

O'Shea, J. (2011b). Delaying the academy: A gap year education. *Teaching in Higher Education*, *16*(5), 565–577.

O'Shea, J. (2013). *Gap year: How delaying college changes people in ways the world needs*. The Johns Hopkins University Press.

Perna, L. W. (2005). The benefits of higher education: Sex, racial/ethnic, and socioeconomic group differences. *The Review of Higher Education*, *29*(1), 23–52.

Perna, L. W. (2006). Studying college access and choice: A proposed conceptual model, 99–157.

Perna, L. W., & Thomas, S. L. (2008). *Theoretical perspectives on student success: Understanding the contributions of the disciplines*. *ASHE Higher Education Report* (Vol. 34, pp. 1–87). ASHE-Higher Education Reader Report. doi:10.1002/aehe.3401

Rankings of Australian Universities 2014-2015. (n.d.). *Australianuniversities.com.Au*. Retrieved February 25, 2014, from http://www.australianuniversities.com.au/rankings/

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, *70*(1), 41–55.

Rosenbaum, P. R., & Rubin, D. B. (1985). Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *The American Statistician*, *39*(1), 33–38.

Rowan-Kenyon, H. T. (2007). Predictors of delayed college enrollment and the impact of socioeconomic status. *Journal of Higher Education*, 188–214.

Rubin, D. B. (2004). Teaching statistical inference for causal effects in experiments and observational studies. *Journal of Educational and Behavioral Statistics*, *29*(3), 343–367.

Simpson, K. (2005). Dropping out or signing up? The professionalisation of youth travel. *Antipode*, *37*(3), 447–469.

Spenader, A. (2011). Language learning and acculturation: Lessons from high school and gap-year exchange students. *Foreign Language Annals*, *44*(2), 381–398.

Stehlik, T. (2010). Mind the gap: school leaver aspirations and delayed pathways to further and higher education. *Journal of Education and Work*, *23*(4), 363–376.

Stephan, G., & Pahnke, A. (2008). The Relative Effectiveness of Selected Active Labour Market Programmes and the Common Support Problem, 1–35.

Stone, M. J., & Petrick, J. F. (2013). The Educational Benefits of Travel Experiences: A Literature Review. *Journal of Travel Research*, *52*(6), 731–744. doi:10.1177/0047287513500588

Stuart, E. (2012). Propensity score methods: The what, how, why, and when (pp. 1–199). Presented at the IES Pre-doctoral Fellow Training Seminar, University of Pennsylvania Graduate School of Education.

The University of Western Australia. (n.d.). UWA in Brief 2013. *Uwa.Edu.Au*.

Top Liberal Arts Colleges. (n.d.). *Colleges.Usnews.Rankingsandreviews.com*. Retrieved February 25, 2014, from http://colleges.usnews.rankingsandreviews.com/best-colleges/rankings/national-liberal-arts-colleges/spp%2B50

What is a Gap Year? (2013, February 20). What is a Gap Year? *Americangap.org*. Retrieved February 20, 2013, from http://americangap.org/about.php

Wine, J., Janson, N., & Wheeless, S. (2011). *2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09) Full-scale Methodology Report (NCES 2012-246)*. Washington, DC.: National Center for Education Statistics, Institute of Education Sciences. Retrieved from http://nces.ed.gov/pubsearch.